

AGRICULTURAL OUTLOOK

October 1989

Economic Research Service
United States Department of Agriculture

A Look at Farmers
Leaving Farming
See page 18

AGRICULTURAL OUTLOOK

October 1989/AO-157

Departments

- 2 Agricultural Economy
- 11 Commodity Spotlights
 - Herbs Take Off
 - Triticale: Has Its Time Finally Come?
- 13 World Agriculture and Trade
 - European Developments
 - Exports Higher In Fiscal 1989, Slipping In 1990
- 18 Farm Finance
 - A Look at Farmers Leaving Farming
 - Farm Income Continues Strong
 - Farm Income Forecast Errors
- 24 Resources
 - Some Tillage Methods Still Leave Insufficient Residue
- 26 Agricultural Policy
 - Issues for the 1990 Farm Bill

Special Articles

- 29 Liberalizing World Trade in Coarse Grains
- 33 Weighing Crop Insurance Alternatives

Statistical Indicators

- | | |
|-----------------------------------|------------------------------------|
| 36 Summary Data | 51 World Agriculture |
| 37 U.S. and Foreign Economic Data | 52 U.S. Agricultural Trade |
| 38 Farm Prices | 55 Farm Income |
| 39 Producer and Consumer Prices | 59 Food Expenditures |
| 41 Farm-Retail Price Spreads | 59 Transportation |
| 42 Livestock and Products | 60 Indicators of Farm Productivity |
| 46 Crops and Products | 60 Food Supply and Use |



Economics Editor—Gregory Gajewski (202) 786-3313

Associate Editor—Patricia F. Singer (202) 786-3313

Consulting Editor—Clark Edwards (202) 786-3313

Managing Editor—Eric Sorensen (202) 786-1494

Editorial Staff—Shirley Hammond

Statistical Coordinator—Ann Duncan (202) 786-3313

Design Coordinator—Carolyn Riley

Production Staff—Karen Sayre, Chloia Peterson

Composition—Joyce Bailey

Contents of the report have been approved by the World Agricultural Outlook Board, and the summary was released September 20, 1989. Materials may be reprinted without permission. Agricultural Outlook is published monthly except for January/February combined issue. Price and quantity forecasts for crops are based on the September 12 World Agricultural Supply and Demand Estimates.

Annual subscription: \$22 U.S., \$27.50 foreign (includes Canada). Order from ERS-NASS, P.O. Box 1608, Rockville, MD 20850. Or call, toll free, 1-800-999-6779 (8:30-5:00 E.T.). Make check payable to ERS-NASS. You will receive an acknowledgement of your subscription order.

Time to renew? Your subscription to Agricultural Outlook expires in the month and year shown on the top line of your address label. If your subscription is about to expire, renew today. Call 1-800-999-6779.

The next issue of Agricultural Outlook (AO-158) is scheduled for mailing on November 3, 1989. If you do not receive AO-158 by November 17, call the managing editor at (202) 786-1494 (be sure to have your mailing label handy). The full text and tables of AO-158 will also be distributed electronically; additional information on this is available at (202) 447-5505.

In Brief. . . News of Farmer Exits, Income, Exports, Coarse Grain Trade

Recent surveys show that farmers' 1988 bankruptcy filings are down by 50 percent from this decade's high, which was in 1986. Despite the 1980's farm financial crisis, farm numbers fell less than in each of the three preceding decades. Farm numbers declined by 266,600 during 1980-89, compared with 1.7 million in the 1950's, 1 million in the 1960's, and 516,000 in the 1970's.

Net farm income could increase by 5 to 16 percent this year, totaling \$48 to \$53 billion. Net farm income measures the value of the current year's production plus Government payments, less total costs. The increase reflects more planted acres and forecast higher production, despite early weather problems in some regions.

Farmers' net cash income, however, is expected to decline 5 to 13 percent from last year's record \$59.9 billion. Net cash income measures the value of commodities sold plus Government payments, less cash costs, and includes sales of stocks built up over previous years. Last year's drought helped push up 1988 net cash income as stocks were sold at high prices. Adjusted for inflation, net cash income is likely to be down from the previous 3 years, but still higher than in 1985.

With higher prices offsetting a small decline in volume, U.S. agricultural exports likely reached \$40 billion in fiscal 1989 (October-September), a \$4.7-billion increase from fiscal 1988. This would be the highest since 1981's record \$44 billion. But, as most prices retreat from drought-induced highs and foreign competition intensifies, U.S. agricultural export value and volume are expected to slip in fiscal 1990.

USDA forecasts that 1989/90 world grain production will be just below the record set in 1986/87. Foreign production will set a record. But consumption will again exceed production, and stocks are forecast to drop for the third consecu-



tive year. Tight supplies of both wheat and rice are expected to boost prices. However, coarse grain prices likely will drop, reflecting the recovery in the U.S. crop.

For oilseeds, the strong recovery in U.S. production and another record foreign crop, along with record carryover in South America, will mean lower world prices. In contrast, cotton prices have been rising because of vigorous world demand and tightening supplies.

U.S. consumers are eating more meat but spending proportionately less of their incomes for it. Annual per capita meat consumption rose from about 207 pounds in 1980 to about 218 pounds last year. At the same time, the proportion of consumers' disposable income spent on meat fell from 3.8 percent to 2.5 percent. Price declines account for much of these changes; the inflation-adjusted prices of red meats have fallen about 17 percent and poultry about 10 percent since 1980. The price declines outpace the declines in other inflation-adjusted food prices.

The contracted area for the five major processing vegetables is up 14 percent in 1989 from a year earlier, and up 15 percent from 1987. Contracted tomato production this year is up 32 percent from last year. In 1988, contracted tomatoes accounted for 98 percent of total processing tomato output. Prices for processed tomato products have been holding steady despite the higher production.

Newly released 1987 Census of Agriculture estimates reveal dramatic increases in U.S. herb farming. Acreage for most herbs increased 122 percent during 1982-87, and quantity harvested jumped 248 percent. Nonetheless, U.S. imports of fresh herbs are also up, according to USDA's Animal and Plant Health Inspection Service.

Proposed GATT reforms could have a major impact on the world coarse grain market. If all trade-distorting policies for agriculture were removed, world coarse grain prices would go up, according to several recent studies. World coarse grain trade, production, and consumption would all rise. U.S. production could rise while EC output would decline. Japan would import less. In part, these results reflect an increase in world livestock production and consumption, spurred by trade liberalization. Market-based returns to U.S. coarse grain growers would rise, but total returns (including Government payments) would fall, unless decoupled income-support payments were made.

Less than 25 percent of the corn, wheat, and soybean acreage surveyed is tilled to leave at least 30 percent of the soil surface covered with residue after planting. This may have implications for the amount of land that would currently meet the conservation compliance provisions of the 1985 Food Security Act. Thirty-percent residue is commonly accepted by conservationists as indicating a conservation tillage system, and in most cases should satisfy the compliance called for in the act.



Agricultural Economy

1989 Crops Reflect Mixed Weather Conditions

Farmers are now harvesting spring-seeded crops. Some are enjoying a bountiful harvest. Others, however, are working with drought-stunted, rain-damaged, or immature crops that will not fill storage bins.

Some rain in late August and early September, plus dry weather in previously soggy areas, helped to offset the regional diversity in conditions. Still, how a farmer is faring depends largely on what region the farm is in. Even within regions there is considerable variation in crop yields, reflecting this season's uneven weather patterns.

The 1988 drought lingered in parts of the Plains States through the winter and into this spring, cutting winter wheat yields by 11 percent. Then, about the time the winter wheat was ripening, heavy rains caused problems at harvest. Rains were plentiful through the summer and into the fall, helping provide good soil moisture for the 1990 crop now being seeded.

Low Moisture Reserves in Corn Belt, Northern Plains

Spring planting conditions in the Corn Belt and the Northern Plains were generally adequate, but rains during the growing season were not sufficient to offset low subsoil moisture reserves. Drought problems reappeared, particularly over

the western Corn Belt and the Northern Plains. Summer crop development was limited by low moisture and sparse rains.

On the plus side, temperatures were cooler than last summer, which helped stretch soil moisture and limited the effect of dry soils on crop yields. Abundant rain at the end of the season in the western Corn Belt and the Plains helped mitigate the early-season dryness.

Farmers in the eastern Corn Belt and the Delta experienced poor conditions during the first part of the growing season because of too much rain. Rain kept farmers in Ohio and Indiana weeks behind normal in getting corn and soybeans planted. Crops in these areas were running as much as a month behind their normal development in late summer. But unusually dry weather in these areas in late August aided crop growth. Nonetheless, warm fall weather is still needed to speed crop maturity. The risk from an early frost is great this year.

East Had Good Year

Farmers in the East had a very good year. The Northeast suffered from low water tables and low reservoirs in late winter, but rains generally replenished moisture supplies. The Southeast enjoyed favorable weather, and yields are expected to be above average to record high. This is the first really good crop year for most Southeastern farmers in 5 or 6 years.

The West was dry again this summer, but the damage has not been as severe as in 1988. Pastures have produced more forage, and there has been little forced movement of cattle to slaughter because of a lack of feed. Also, late summer and early fall rains helped establish fall-seeded pastures in many areas, which will provide feed for the winter.

Weather improved in the Northwest this year, and crop yields are responding. The worst of the dryness seemed to skirt the region, even though some producers are again having a hard year.

Crop Production Bounces Back

The index of all U.S. crop production fell 16 percent last year because of the drought. Particularly hard hit were most grains, oilseeds, and forage. Production this year is rebounding to just below

1987's levels, but will still fall short of production in the early and mid-1980's. Cotton production, an exception to the rebound, is declining because of reduced acreage.

The increase in crop production is substantial, even though weather conditions have been much less than ideal. Part of the increase reflects a rise in seeded acreage. Farmers increased acreage because crop prices were the highest in several years, and because Government acreage-reduction provisions were relaxed, allowing operators to expand plantings and still be eligible for benefits. Cotton is an exception; the acreage reduction provision was increased to 25 percent of base acres.

Crop yields are a better measure than production of the impact of mixed weather patterns on U.S. agriculture. The September *Crop Production* report indicates that corn and oats yields may be up a third from last year's low. Barley, soybean, and hay yields are up about a fifth. All-wheat yields are off about 4 percent; marked increases in spring wheat yields are being more than offset by an approximately 11-percent drop in winter wheat yields.

Larger Crops Are Needed

The demand for U.S. agricultural products is strong, even though prices have risen. Export volume likely has been about steady, while export value probably rose from \$35 billion in fiscal 1988 to \$40 billion. Domestic use is also holding up. So the sharp production decline in 1988 was offset to some extent by drawing down the large stocks of grains and oilseeds.

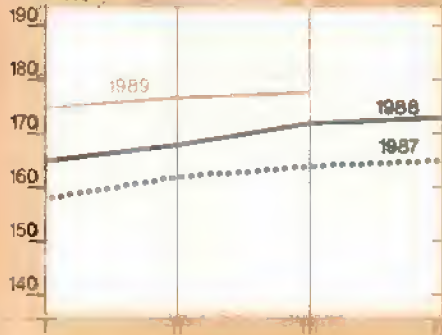
Stocks of most crops will again be whittled down, but will remain above pipeline needs during the 1989/90 season. The drawdown in stocks will also occur in other countries, but the rate of decline will be much less. The farm prices of most crops will remain sensitive to weather developments this winter, both here and abroad.

Farmers could well expand acreage again this winter and next year, responding to similar factors that boosted planted acreage this season. Thus, 1990 weather conditions will again be the focal point of the crop outlook. (Don Seaborg (202) 786-1880)

Prime Indicators of the U.S. Agricultural Economy

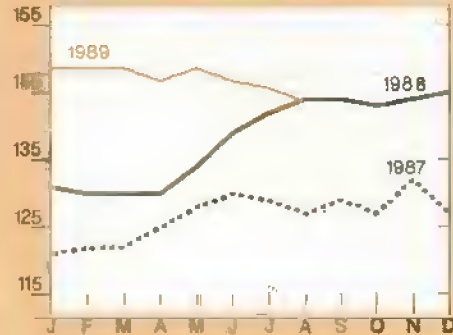
Index of prices paid by farmers¹

1977 = 100



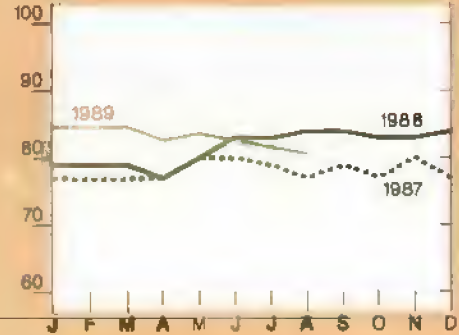
Index of prices received by farmers¹

1977 = 100



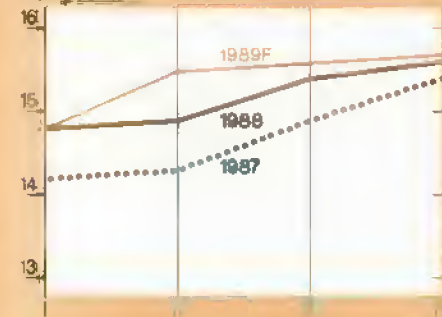
Ratio of prices received to prices paid

Percent



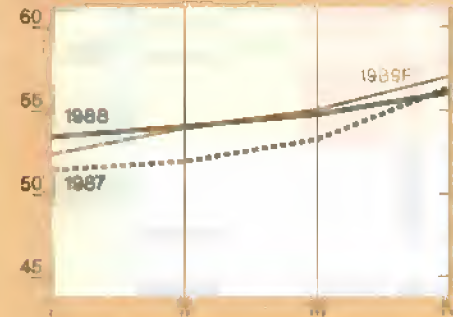
Red meat & poultry² production

Billion pounds



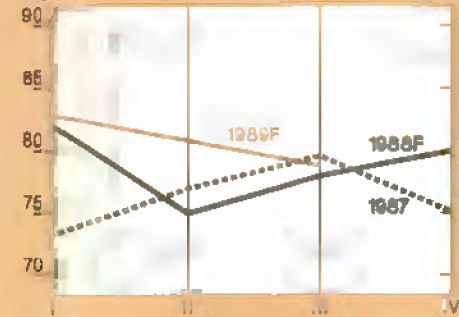
Red meat & poultry consumption, per capita^{2,3}

Pounds



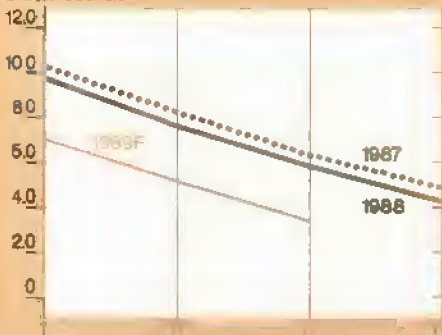
Cash receipts from livestock & products⁴

\$ billion



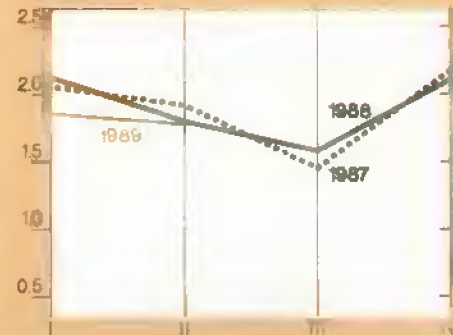
Corn beginning stocks⁵

Billion bushels



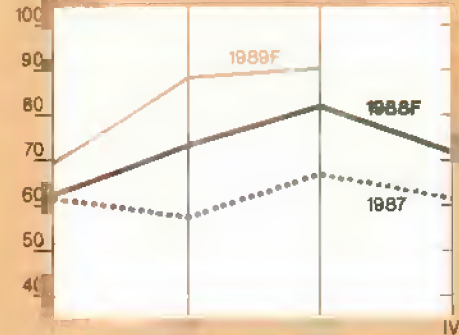
Corn disappearance⁵

Billion bushels



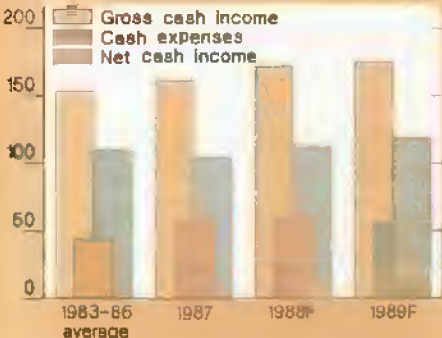
Cash receipts from crops⁴

\$ billion



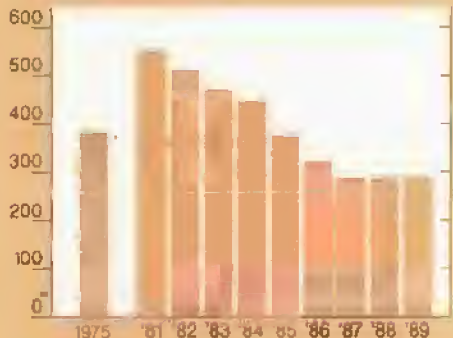
Farm net cash income

\$ billion



Average real value of farm real estate

1977 \$/acre



Farm value/retail food costs

Percent



¹For all farm products. ²Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts.
³Retail weight. ⁴Seasonally adjusted annual rate. ⁵I=Dec.-Feb., II=Mar.-May, III=June-Aug., IV=Sept.-Nov. F=forecast.

Livestock, Dairy, and Poultry Overview

U.S. consumers are eating more meat but spending proportionately less of their incomes for it. Annual U.S. per capita consumption of red meat and poultry increased from about 207 pounds (retail weight basis) in 1980 to about 218 pounds in 1988. Over the same period, the proportion of disposable income consumers spent for beef, pork, broilers, and turkey declined from about 3.8 percent to about 2.5 percent—a 34-percent drop in income share.

Meats account for a smaller percentage of income partly because lower priced poultry now makes up a larger proportion of meat consumption. But, more importantly, the inflation-adjusted prices of red meats have fallen about 17 percent and poultry about 10 percent in the past 9 years, outpacing the general decline in real prices for other foods.

Expenditures for all foods as a share of income have fallen, but less dramatically, from 13.6 percent in 1980 to 11.8 percent in 1988. This represents a 13.2-percent change in share of income.

Cattle Are Larger and Leaner

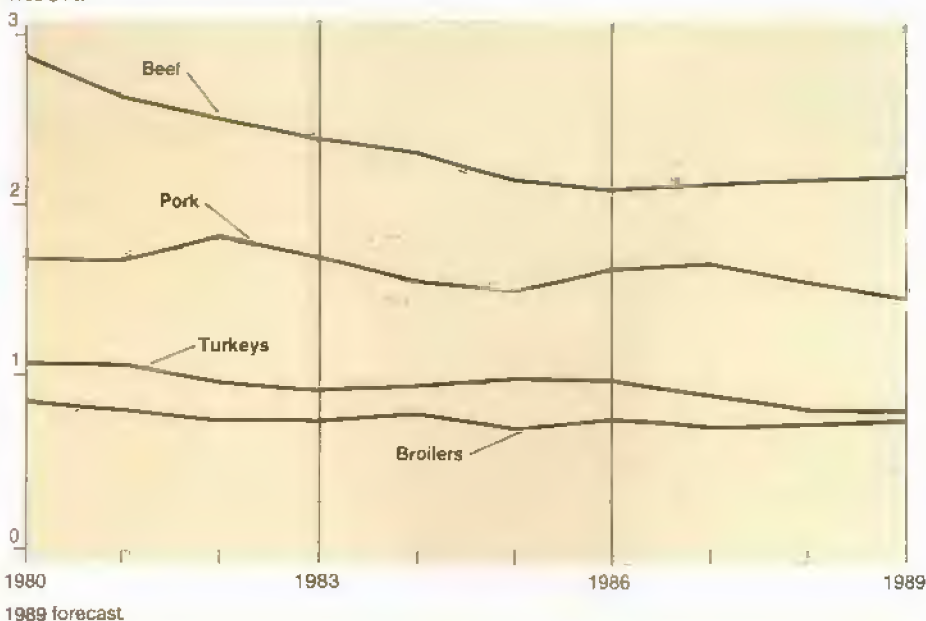
The average weight of federally inspected cattle carcasses has risen by nearly 5 pounds per year since 1974. The weights of fed cattle, especially, have been going up, because of breeding efforts and also because cattle have been placed in feedlots at greater weights. Though the number of cattle slaughtered has been declining since 1986, beef production increased in 1988 because greater carcass weights offset the decrease in numbers.

During January-July 1989, the number of cattle slaughtered was 3 percent below 1988, while federally inspected carcass weights averaged 8 pounds heavier. Beef production for this period was down only 2 percent from last year.

Today's consumer prefers a leaner product in the meat case, and marketing practices are changing accordingly. Generally, beef quality grade (and finish or fatness) increases with slaughter weight. But recently, even though slaughter weights have been increasing,

Real Prices of Meat Have Fallen

1982-84 \$/lb



so has the percentage of steer and heifer carcasses of the leaner Select quality grade. The change probably indicates that cattle types are getting larger in bone structure and muscling, so are not as fat at greater weights.

Besides the increase in fed cattle weights, a higher proportion of the slaughter mix now consists of fed cattle. About 77 percent of the slaughter mix is now composed of fed steers and heifers, compared with about 70 percent in the mid-1980's.

Cattle Prices Likely To Rise

The composite retail price for Choice beef in August was \$2.69 per pound, down 2 cents from July and slightly below the second-quarter average. The beef farm-to-retail price spread reached a record \$1.22 per pound in July but declined to \$1.17 in August. The spread widened from the second-quarter average of \$1.11 on the retail side because of greater loin and rib retail prices, and on the farm side because of the decline in live cattle prices. Retail beef price movements have a 1-to-1 effect on the price spread, while cattle price movements have a 2.4-to-1 effect.

The farm value of cattle slipped to an annual low because of the large summer supplies of competing meats and slaughter cattle—especially those cattle that were relatively heavy. Prices for Choice

fed steers declined from the middle \$70's per cwt this spring to the upper \$60's in September. The spread is expected to narrow early this fall; cattle prices are likely to increase at a greater rate than retail prices as fed beef supplies decline seasonally.

Expanded Slaughter Capacity To Boost Hog Prices

Expansion in the pork packing industry could lend significant support to hog prices this fall. After declining for several years, slaughter capacity appears to have increased in 1989; several packers have opened new facilities or remodeled old ones. The increased competition among packers has been reflected in smaller spreads between hog prices and carcass cutout values this year.

Through August, cutout values averaged about \$4 per cwt below a year earlier, while barrow and gilt prices were down only \$2.50 per cwt. The reduction in spreads occurred despite an increase in hog supplies.

Support for hog prices could be more pronounced this fall, as hog marketings are expected to drop below a year earlier. Also, some slaughter expansion projects have been completed only recently, and will become fully operational during the fourth quarter.

With a larger number of hogs demanded and slightly fewer available, barrow and gilt prices at the 7 markets likely will be above the fourth-quarter 1988 average of \$38.50 per cwt.

Broiler Expansion Continues, Prices Decline

The 10-percent estimated expansion in third-quarter broiler production for 1989 was reflected in lower wholesale prices. Average monthly prices fell below 1988 for the first time in July, and they are likely to be at or below 1988 levels for the rest of the year. The 12-city broiler price averaged 62 cents per pound in July and 57 cents in August, compared with 67 and 69 in 1988. Retail prices are also forecast lower for the rest of 1989.

Even with lower prices, net returns probably will remain positive for the rest of the year because of lower feed prices. Net returns for 1989 are expected to average 8-12 cents per pound, compared with just under 8 cents in 1988. Third-quarter returns likely averaged 10-12 cents per pound, and fourth-quarter returns are forecast to be 4-8 cents per pound.

Broiler production in 1989 likely is rising 6-7 percent. First-half production of 8.5 billion pounds, ready-to-cook, was 5 percent above a year earlier, and second-half production is increasing 7-8 percent. Weekly egg sets in July and August were 5-8 percent ahead of last year, while chicks placed were up 6-8 percent. Broiler production in 1990 is expected to expand 7-8 percent, encouraged by continued positive net returns even in light of past output growth.

Turkey Production Rising Sharply

First-half 1989 turkey production was unchanged from last year, but third-quarter output likely increased about 9-10 percent, and fourth-quarter output will increase about 12 percent from 1988. Production for the year will be up about 6 percent, compared with 3.7 percent during 1988.

High prices and positive net returns in the second quarter, plus lower feed cost prospects this fall, likely are boosting turkey production in the second half.

Updated Conversion Factor Reflects Leaner Beef

Beef consumption figures appearing in *Agricultural Outlook* depend on a conversion factor that is applied to carcass-weight data to estimate retail weight. A carcass-to-retail conversion factor of 0.74 was used for beef during 1962-85. For 1986, the factor was reduced to 0.73 to reflect closer trimming of fat (down to one-quarter inch) and more boneless cuts.

The carcass-to-retail conversion factor is now re-estimated for each calendar year as data become available. The conversion factor for 1987 was 0.71. For 1988, it has recently been estimated at 0.705.

The 1988 factor has been used to revise the estimates of per capita consumption in the Supply and Utilization data in this issue (table 10). The reduced factor indicates that the consumer received more lean beef per pound of product purchased;

the change reflects another increase in trimming of fat.

The Texas A & M National Beef Market Basket Survey, taken in 1987 and early 1988 in 12 cities across the U.S., was used in part to recompute the conversion factor.

Compared with calculations under the old 0.74 factor, the recent revision reduces the estimate of retail beef disappearance (per capita consumption) by 3.5 pounds for 1988. But, closer trimming may not have affected very much the amount of beef actually ingested by consumers. The fat and bone now removed before retail sale may earlier have been left in the consumer's pan as grease or on the plate as table scraps.

Until data for 1989 are available in 1990, the 1988 conversion factor will be used for the 1989 beef estimate. [Larry Duewer, Ken Nelson, and Fred White (202) 786-1712]

Wholesale prices dropped below a year earlier in July and August because wholesale buyers reduced purchases for end-of-the-year holiday specials when they expected second-half output to escalate. Eastern region wholesale hen turkey prices fell below 60 cents a pound in early September, compared with a high of 73 cents in June. Although prices are expected to rise as the holidays approach, they likely will remain below a year earlier.

Retail prices for frozen whole turkeys rose in July to \$1.05 a pound, compared with 96 cents a year earlier. But they are expected to ease later in 1989.

The three leading turkey-producing States continue to increase output in 1989. The preliminary USDA estimate of turkeys raised during 1989, 254.7 million birds, is up 5 percent from 1988. North Carolina, Minnesota, and California, the leading States, each show above-average increases. Their combined share is up from 43 percent of the national output in 1980 to nearly 49 percent this year.

Favorable Egg Returns Likely To Continue

Net returns to egg producers are expected to be positive this year, reflecting relatively low supplies. Net returns

likely were 14-15 cents per dozen in the third quarter and are forecast to be 7-9 cents in the fourth. The last time average net returns to egg production were positive for all four quarters of a calendar year was 1976. Returns in the first quarter of 1990 likely will continue to be positive.

Total egg production in 1989 is expected to be down about 2 percent. Third-quarter production likely was down 1 percent, but flock rebuilding is expected to raise output 1 percent during the fourth quarter.

Hatching egg production for the year will be up about 4 percent, mainly reflecting expansion in the broiler industry. The total laying flock is about 1 percent below a year ago, with the table-egg laying flock down about 2 percent and the broiler-hatching egg flock up 3 percent. First-quarter 1990 production will be 1 to 2 percent above a year earlier.

Average egg prices moved up sharply in August, from 77 cents per dozen in July to 89 cents. The increase was caused in part by the Mexican purchase of 15 million dozen eggs for delivery in September, October, and November.

Production of Livestock and Products

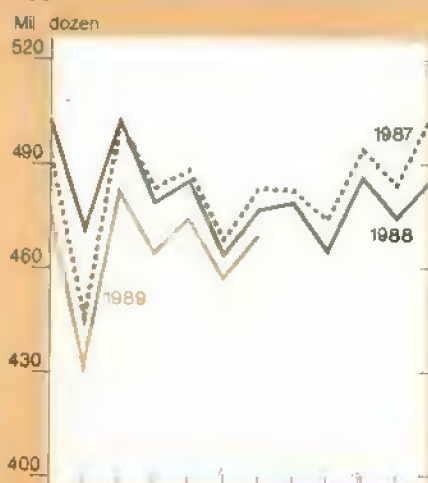
Commercial beef



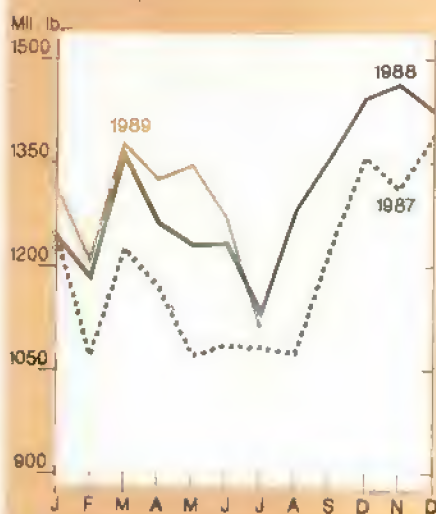
Broilers¹



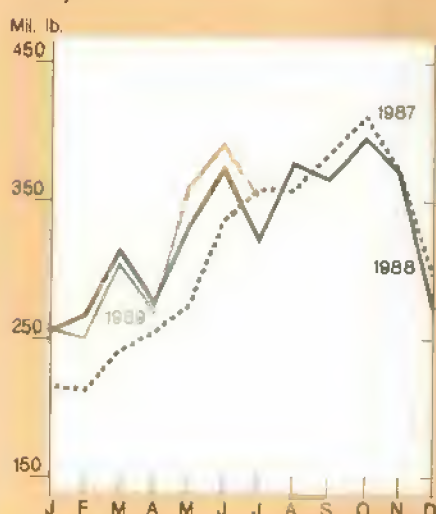
Eggs



Commercial pork



Turkeys¹



Milk



¹Federally inspected production, ready-to-cook.

Wholesale prices likely averaged 80-81 cents per dozen in the third quarter, 7-8 cents above a year earlier. Fourth-quarter prices are expected to be 68-72 cents per dozen, compared with 67 cents a year before. Prices for 1990 are expected to average 62-68 cents.

Farm Milk Prices On the Rise

The 1989 annual average price of all milk is expected to climb about \$1 above 1988's \$12.24 per cwt, to the highest since 1984. Average manufacturing grade milk prices probably will be \$1.50 or more above the current support price.

Strong wholesale prices for products—the result of brisk commercial use of cheese and nonfat dry milk, and lower milk production—kept the summer all-milk average price more than \$1 above last summer. The August average of \$12.90 per cwt was up \$1.10 from a year earlier and was the highest price for the month since 1984.

The Minnesota-Wisconsin (M-W) price for manufacturing grade milk was \$12.37 per cwt in August, up more than \$1 since April and about \$2 above the support price. The M-W price could reach more than \$13 per cwt by fourth-quarter 1989.

without much more of an increase in wholesale prices.

September all-milk prices probably were well above a year earlier. Fourth-quarter milk prices are expected to remain above a year earlier. Commercial use probably will stay brisk, and milk production is not forecast to make a very strong recovery.

For further information, contact: Ken Nelson, coordinator; Fred White, cattle; Kevin Bost, hogs; Lee Christensen and Larry Witucki, broilers, turkeys, and eggs; Sara Short and Jim Miller, dairy. All are at (202) 786-1285.

Field Crops Overview

A larger harvest of most crops is likely in 1989/90. World grain production is forecast to total 1,659 million metric tons, only 1 percent below the record of 1986/87. Foreign production will set a record. But consumption will again exceed production, and stocks will drop for the third consecutive year. Tight supplies of both wheat and rice are expected to boost prices. However, coarse grain prices will drop because of the recovery in the U.S. crop.

For oilseeds, strong recovery in U.S. production and another record foreign crop, along with record carryover in South America, will mean lower world market prices. In contrast, cotton prices have been rising because of continued vigorous world demand and tightening supplies.

Wheat Prices Up in 1989/90

World wheat production is forecast up 5 percent in 1989/90 (table 26). However, consumption is expected to outpace production for the third consecutive year, reducing stocks to their lowest since 1975/76. The world stocks-to-use ratio is forecast to drop to 20 percent, the smallest in 30 years. World trade may grow slightly, but higher prices and much smaller USSR imports are holding total imports below the volume of 2 years ago.

U.S. supplies of wheat in 1989/90 are likely to be down 10 percent from a year earlier; lower beginning stocks more than offset expected production gains. Production is forecast up 14 percent to 2.1 billion bushels, while total use is projected at 2.3 billion, down 5 percent from last year.

Lower U.S. wheat supplies, together with larger competitor supplies, mean U.S. exports may be down more than 10 percent to less than 1.3 billion bushels. Production by the major foreign exporters is forecast up 13 percent, as Canada and Argentina recover from drought.

U.S. wheat ending stocks are forecast to decline for the fourth straight year in 1989/90, as demand continues to outstrip production. Ending stocks next May 31 are forecast at 494 million bushels, down

about 30 percent from a year earlier and the lowest since 1974/75. Most of the reduction will be in Commodity Credit Corporation (CCC) inventory and the Farmer-Owned Reserve (FOR).

FOR loans are expected to be redeemed as they come due. The presidential authorization to use a portion of the Food Security Reserve for food aid shipments is likely to contribute to the decline in the CCC inventory.

U.S. farm prices for wheat are expected to range from \$3.85 to \$4.20 a bushel for the 1989/90 season, well above 1988/89.

Farmers Allowed To Flex Wheat Plantings

On September 13, the Secretary announced that participating farmers have the option of planting up to 105 percent of their wheat base acres to boost 1990 supplies. But for every acre of wheat planted in excess of 95 percent of the base, the acreage used to compute deficiency payments will be cut by 1 acre. So if a producer plants 105 percent of the base, only 85 percent will be used to compute deficiency payments.

Farmers who plant the extra wheat on corn or other program crop base acres will not lose that base. But the increase in plantings will not increase their future wheat base.

Moreover, farmers still retain the option of holding to the 5-percent acreage reduction announced earlier, with the usual deficiency payment computations.

Rice Prices Also To Rise

World rice demand has been strong and supplies are tight, pushing prices up. China, Indonesia, and Iran have led the increased demand in calendar 1989. World rice prices rose sharply, from \$5.90 per cwt for long grain rough rice in January to a peak of \$8.91 per cwt in July.

During August, world rice prices started to soften, following a seasonal pattern. Prices dropped from \$8.91 per cwt on August 1 to \$7.70 on August 22, because of slowed import activity and increased availability of exportable supplies. Several importers have passed over tenders,

apparently waiting for prices to come down even further this fall.

Thailand is harvesting a relatively large second-season crop and prospects are good for the main-season crop, harvested in December and January. In addition, Vietnam entered the rice market as an exporter this year, reportedly selling 405,000 tons of low-quality rice.

However, with tight U.S. rice supplies and continued strong global demand, U.S. farm prices for 1989/90 are expected to average well above the estimated \$6.50-\$7.00 of 1988/89.

Feed Grain Prices Ease Despite Smaller Stocks

The U.S. feed grain harvest for 1989 is estimated at 217 million tons. This is 45 percent above last year. Area harvested is forecast to increase 11.2 million acres, or 14 percent, because less land was idled under annual Government programs and fewer acres were abandoned. Improved growing conditions increased the forecast yield to 2.37 tons per acre, 27 percent above last year.

The U.S. feed grain supply for 1989/90 is forecast at 281.7 million tons, down 1 percent from last year. A projected draw-down of 70 million tons in beginning stocks will not be completely offset by this year's larger production.

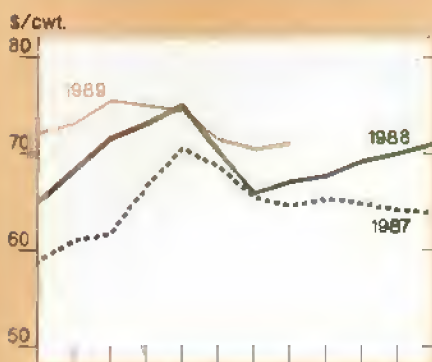
Total use in 1989/90 is projected at 225 million tons, an increase of 5 million from the estimate for 1988/89. Domestic use is expected to rise by almost 9 million tons, but exports may drop despite lower prices because of greater competition from foreign shippers. With use likely to exceed production, U.S. ending stocks may drop about a tenth.

The U.S. share of the world market is expected to fall in 1989/90 as competitor production recovers. Production in Argentina should rise sharply with the return of more normal weather, and South Africa has a large carryover from 1988/89. World coarse grain trade in 1989/90 is not expected to change from 1988/89, but U.S. exports are forecast down 7 percent to 59 million tons.

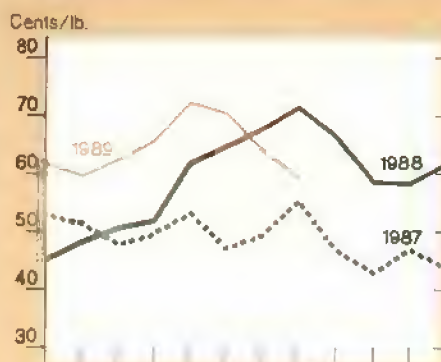
The 97 million tons of world coarse grain trade expected in 1989/90 is about 13 million above the 1985/86-1987/88 average. The main reason is forecast

Commodity Market Prices

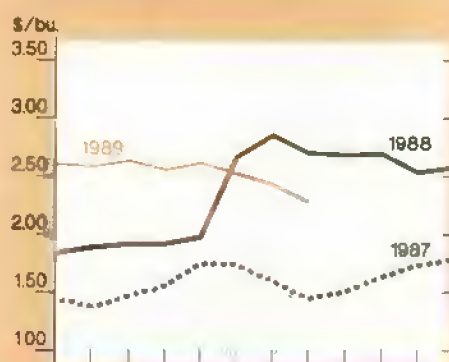
Choice steers, Omaha



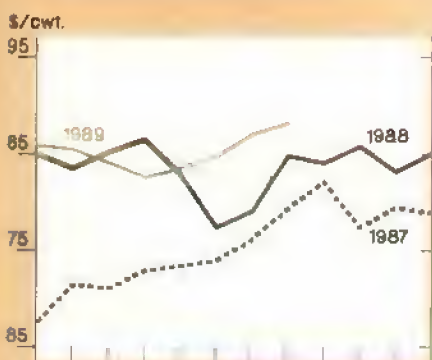
Broilers, 12-city average



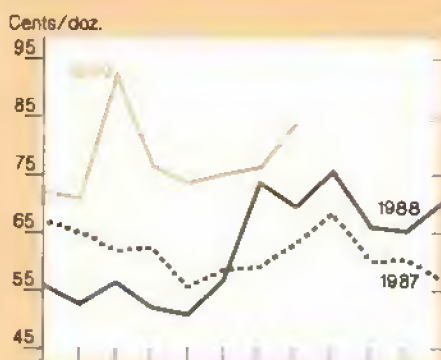
Corn, Chicago³



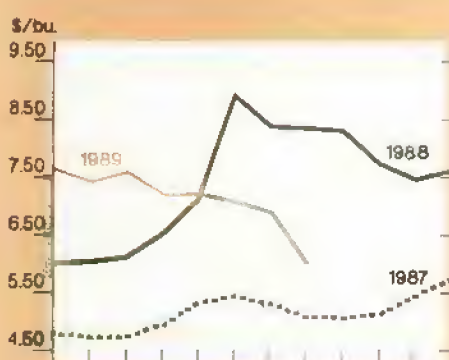
Feeder cattle, Kansas City¹



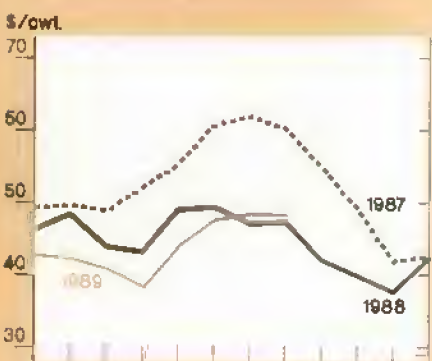
Eggs, New York²



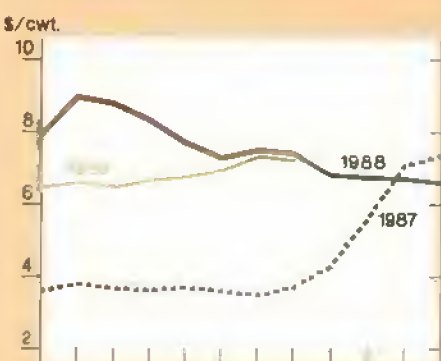
Soybeans, Chicago⁴



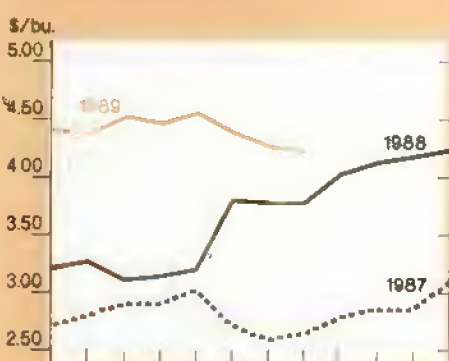
Barrows and gilts, 7 markets



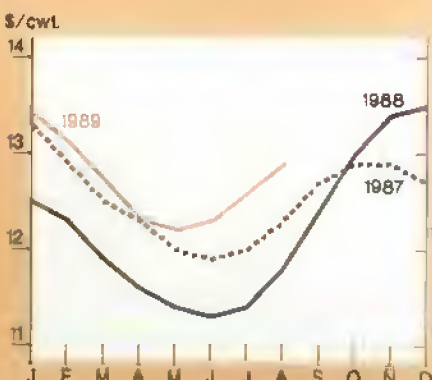
Rice (rough), SW Louisiana



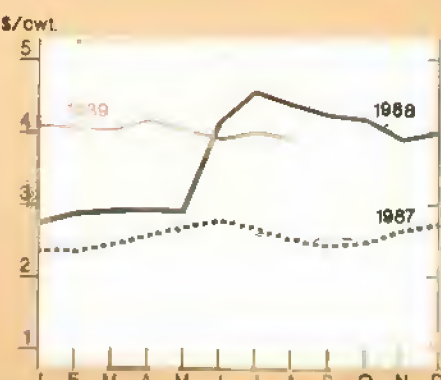
Wheat, Kansas City⁵



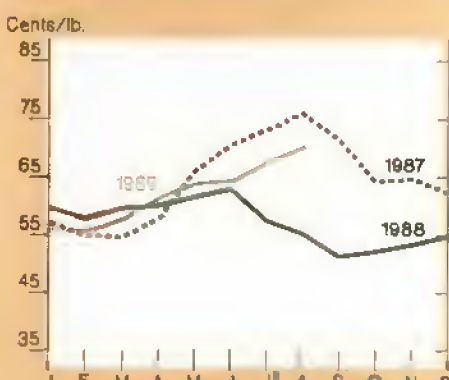
All milk



Sorghum, Kansas City



Cotton, average spot market



¹600-700 lbs., medium no. 2

²Grade A large.

³No. 1 yellow.

⁴No. 2 yellow.

⁵No. 1 HRW.

larger Soviet purchases, in turn caused by a growing demand for meat and cutbacks in imports of wheat for feed. Demand in most other markets is flat or down. Japan, once a consistent coarse grain growth market, has shown no growth over the last 2 years, largely because restrictions on meat imports have been relaxed.

Large Supplies Weaken Soybean Prices

Led by the recovery of U.S. soybean production, the 1989/90 world oilseed crop may hit a record 213 million tons. A record Southern Hemisphere crop is expected, although planting there is still several months away, and shifting policies are adding to uncertainty. With a larger supply, crush and trade in oilseeds and products are projected to increase, and prices will average well below those of 1988/89.

Reflecting short soil moisture, this year's U.S. soybean crop has been more vulnerable than usual to the weather. This has heightened price variability. Parts of the western Corn Belt experienced dryness early in the growing season. Crop maturity in the eastern Corn Belt is behind normal because of excessive rain in late spring and early summer. As a result, crop quality and yields are less certain.

Soybean prices received by farmers for marketing year 1989/90 are estimated to average \$4.75-\$6.25 per bushel. This is significantly lower than the estimate of \$7.35 for 1988/89, signaling a return to a more normal supply situation. Monthly average soybean prices received by farmers have trended downward from a \$7.59 high in January.

U.S. Peanut Crop Sets Record; Cotton Supplies Tight

The largest planted acreage since the 1950's and the highest yields since 1985 are expected to produce a record U.S. peanut crop of 4.44 billion pounds this year. Generally favorable growing conditions in the major production regions are expected to raise yields to 2,688 pounds per acre, 10 percent higher than last year. Plentiful peanut supplies likely will limit upward price pressure during the 1989/90 marketing year.

The 1988/89 peanut marketing year concluded July 31, with domestic food use

up 8 percent to a record 2.24 billion pounds.

World and U.S. cotton prices moved higher last season because of strong foreign and domestic mill demand and tight foreign stocks. Weather-related production problems in the U.S., and the prospect of no increase in foreign production, have continued to support prices. The average spot price for SLM 1-1/16 inch cotton reached 67 cents per pound in July, up from 57 cents a year earlier. And the adjusted world price (the U.S. equivalent of the world price) rose throughout July to almost 68 cents, compared with 52 cents a year earlier.

The 1989 U.S. cotton crop is forecast at 12.3 million bales, 20 percent below a year earlier. Planted acreage of 10.5 million was 16 percent less than in 1988, while the forecast yield of 618 pounds per acre is virtually identical to the previous year. The total U.S. cotton supply is projected at 19.4 million bales for 1989/90, almost 2 million below the previous season.

Domestic U.S. mill consumption in 1989/90 is expected to reach 7.7 million bales, up from 7.6 million last year. This gain reflects strong consumer sales, lower textile inventories, and strong demand for denim.

Foreign import demand is up; world textile markets remain strong. Conditions in foreign exporters include unchanged production, lower beginning stocks, and higher consumption, so the U.S. market share should rise sharply.

U.S. cotton exports are projected to total 7.8 million bales, 25 percent over 1988/89. This gain, together with larger domestic consumption, is forecast to bring U.S. ending stocks on August 1, 1990, down to 3.9 million bales. *[Joy Harwood and Frederic Surls (202) 786-1840]*

For further information, contact: Sara Schwartz, world food grains; Edward Allen, domestic wheat; Janet Livezey, domestic rice; Pete Riley, world feed grains; Larry Van Meir, domestic feed grains; Bob Cummings, world oilseeds; Roger Hoskin, domestic oilseeds; Carolyn Whitton, world cotton; Bob Skinner, domestic cotton; Jim Schaub, domestic peanuts. World information (202) 786-1824; domestic (202) 786-1840.

Specialty Crops Overview

The contracted area for the five major processing vegetables (green beans, sweet corn, tomatoes, peas, and cucumbers) is up 14 percent in 1989 from the year before, and up 15 percent from 1987. Contracted tomato production this year is up 32 percent from last year. In 1988, contracted tomatoes accounted for 98 percent of total processing tomato output. Prices for processed tomato products have been holding steady despite the higher production.

Consumption of 15 major fresh and processing vegetables fell slightly in 1988, primarily because of reduced use of canned vegetables, especially tomatoes. Consumption of fresh and frozen vegetables continued rising. Prospects for a larger tomato crop portend a rise in total vegetable consumption in 1989 and 1990.

U.S. tree nut production will be down sharply in 1989 because of smaller crops of almonds, filberts (hazelnuts), pecans, and pistachios. Almond production is estimated at 425 million pounds (kernel weight), down 28 percent from 1988. Despite the lower output, the supply for the marketing year (July-June) will be nearly the same as the year before, reflecting large beginning stocks. Growers' prices may be up slightly from 1988/89.

Fewer Pecans, Pistachios Expected This Year

Pecan production is forecast at 245.8 million pounds (in-shell basis), 20 percent below 1988. Pecans are an alternate-year bearing crop, and production in 1988 was 308 million pounds, a relatively large crop.

Pistachios also bear more heavily in alternate years, and 1988 was a record for U.S. production. Consequently, prospects for 1989 are for a smaller crop. First estimates indicate output of 28 million pounds, in-shell.

Walnut output is estimated at 210,000 tons, in-shell equivalent, 2 percent higher than in 1988. Strong export demand likely will keep prices firm.

Fresh Vegetables Lead Expansion

Over the last 18 years, growth in fresh use has led overall vegetable use, rising 2 percent per year since 1970. Fresh use, 70.6 pounds per person in 1970, reached 100.3 pounds in 1988. Higher incomes and greater emphasis on fresh vegetables' health benefits likely have driven the increase.

Frozen vegetable consumption also has been rising, but at a slower pace. Per capita consumption of frozen vegetables rose an average 1.5 percent per year between 1970 and 1988, from 13.5 to 17.5 pounds.

Part of the growth in fresh and frozen consumption has come at the expense of canned vegetables. Consumption of canned vegetables was 91.4 pounds per person in 1970, but fell to 87 pounds by 1987. Although canned use dropped to 82.8 pounds per person in 1988, partly because of drought-reduced tomato, green bean, sweet corn, and green pea crops, it likely will return to about 87 pounds in 1989.

Not all vegetables are included in consumption estimates. Many vegetables, including cabbage, peppers, spinach, squash, and eggplant, are excluded because estimates of their total production are unavailable. Potato, sweetpotato, mushroom, dry pea, and lentil consumption are estimated separately.

Mushroom Industry Still Growing Despite Foreign Competition

Despite intense competition from China, Taiwan, and Hong Kong in canned mushrooms, strong growth in domestic demand for fresh mushrooms is sustaining the U.S. industry.

U.S. production rose 6 percent in marketing year 1988/89 (July-June) from the year before. Per capita consumption of all mushrooms climbed from 1.3 pounds in calendar 1970 to 3.5 in 1988. Imports supplied 50 percent of U.S. canned mushroom consumption in 1988, compared with 37 percent 10 years earlier.

The U.S. industry has shifted from producing primarily for processing to mainly fresh use. Back in 1970-71, 28 percent of U.S. mushroom production

was marketed for fresh use; the remainder was for processing. By 1988-89 the proportions were reversed, 72 percent for fresh use and 28 percent for processing.

Fresh market sales of domestic mushrooms grew an average of 7.7 percent per year during the last 10 years, whereas volume of processing sales diminished by 2 percent annually. The overall effect was about 4 percent average annual growth for total mushroom production.

Fresh mushroom consumption grew from only 0.3 pound per person in 1970 to 2.0 pounds in 1988. Per capita consumption of processed mushrooms rose from 0.9 pound per person in 1970 to 1.5 pounds in 1988. Fresh use has been boosted by the increased popularity of salads and fresh vegetables. Exotic mushrooms (shiitake, oyster, and others) have gained a wider audience, also contributing to the growth in fresh consumption.

Mushroom imports, mostly canned, have nearly doubled since 1975 and more than supplied the growth in domestic consumption. Consequently, domestic sales of mushrooms for processing have fallen. Mainland China is the major source of canned mushrooms exported to the U.S., supplying 56 percent in 1988.

Increased Production Drops Catfish Prices

The quantity of catfish processed during the first 7 months of 1989 rose 16 percent over the same period in 1988, raising processors' inventories of frozen fish and lowering both grower and processor prices. The area in catfish ponds grew 8 percent in 1989, indicating the industry's intentions to continue expanding.

Grower prices fell in July to 71 cents per pound, 9 cents below a year earlier. Although grower prices remained relatively steady at 75 to 78 cents per pound during the first half of 1989, prices have been gradually slipping for nearly a year. Farm-raised catfish output grew 5 percent in 1988.

Larger inventories of live catfish indicate that production likely is continuing strong during second-half 1989. As of July 1, grower inventories of food-size fish were up only 3 percent from a year earlier, but inventories of fry-fingerlings

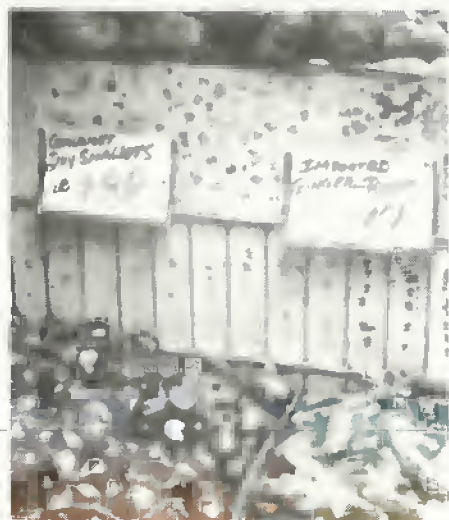
were up 38 percent. In addition, July 1 hatchery inventories of broodfish were up 40 percent from a year earlier, while stocker and fry-fingerling inventories were each up 29 percent. The increases will keep downward pressure on prices.

Most pond area growth is occurring in Mississippi, Arkansas, Alabama, and Louisiana. These States account for 91 percent of U.S. catfish pond acreage. Despite the rise in acreage, the number of growers fell 9 percent during 1989. [Glenn Zepp and Catherine Greene (202) 786-1883]

For further information, contact: Kate Buckley, fruit; Shannon Hamm, vegetables; Peter Buzzanell, sweeteners; Verner Grise, tobacco; Doyle Johnson, tree nuts and greenhouse/nursery; David Harvey, aquaculture. All are at (202) 786-1883.

Upcoming Economic Reports

| Summary Released | Title |
|---------------------|----------------------------|
| October | |
| 12 | World Ag. Supply & Demand |
| 19 | Dairy |
| 20 | Agricultural Outlook |
| 23 | Rice |
| | Livestock & Poultry Update |
| 25 | Foreign Ag. Trade Update |
| 26 | Oil Crops |
| 27 | National Food Review |



Commodity Spotlights

Herbs Take Off

Newly released 1987 Census of Agriculture estimates reveal dramatic increases in U.S. herb farming. Acreage for most herbs increased 122 percent during 1982-87, and quantity harvested jumped 248 percent.

In the U.S., herbs now go to uses as diverse as cooking, landscaping, bridal wreath creations, and "aromatherapy." Foodservice and retail suppliers are currently forming herb divisions, enlarging their herb-growing operations and building new high-tech packinghouses for herbs.

Concurrently, the associations that provide support for herb growers and suppliers are rapidly expanding their membership. The International Herb Growers and Marketers Association has more than doubled its membership from 450 only 3 years ago to 1,050 today.

Marketing Channels Are Diverse

Major marketing channels exist for fresh and dried culinary herbs, potted plants and decorations, food and medicinal products, and fragrances. Sometimes the same herb can be marketed through several channels. For example, both fresh and dried rosemary is available in some supermarkets; it is also sold as a potted

plant at herb garden nurseries, and can be found in Christmas wreaths at farmers' markets during the winter.

Garlic is also sold for culinary uses, as a dietary supplement, and braided with dried flowers for sale as a decoration in upscale kitchen boutiques and farmers' markets.

Feverfew is used in herbal landscaping design, and a recent article in *The Lancet* reports that it may be effective in preventing migraine headaches.

Other examples include jasmine, which is used in teas as well as high-grade perfumes, and foxglove, which is used as both an ornamental plant and in the cardiovascular drug digitalis.

Most of the culinary herbs are used primarily as food flavorings. Herbs are aromatic plants grown in temperate regions, as distinct from spices, which are grown in the tropics.

Fresh-Cut Herbs Are Growth Industry

Fresh culinary herbs for the retail market and foodservice industry form one of the fastest-growing segments of the U.S. herb industry. In the past, fresh culinary herbs were used mainly in expensive restaurants and by those with herb gardens at home. Now they are becoming available in supermarkets, farmers' markets, and moderately priced restaurants. Wider availability reflects, in part, improved production, storage, and marketing techniques.

According to *The Packer's* 1989 consumer survey, the top five fresh herbs in consumer recognition are garlic (95 percent of respondents), parsley (86 percent), dill (67 percent), chives (66 percent), and ginger root (59 percent). A majority of the respondents had bought these five herbs.

More than half of the surveyed consumers had seen or heard of fresh basil, while a third or more had seen or heard of fresh mint, horseradish, oregano, sage, thyme, rosemary, and anise. Twenty-seven percent recognized cilantro and marjoram.

Census Estimates Show California Is Top Grower

The scale of herb-growing operations ranges from hobby farmers and backyard nurseries in congested urban areas to open-air farms with more than several hundred acres.

The Census reports separate estimates for the number of farms and harvested acreage for six herbs: garlic, parsley, watercress, ginger root, dill for oil, and mint for oil. An estimate of "all other" herb acreage is also reported. Estimates reflect both fresh-market and processing uses, except for dill and mint, which do not include acreage for fresh and dried products.

California leads in garlic and parsley acreage according to the Census, and Florida has the most watercress acreage, while Hawaii is the only U.S. producer of ginger root. Washington State leads in dill acreage, and Oregon has the most mint acreage.

Although 1987 California garlic acreage was down slightly from 1982, the previous Census year, State reports indicate that production has trended up. Annual U.S. consumption is likely over a pound per person now, up from 0.6 to 0.8 pound in the early 1980's.

Acreage and production of ginger root and dill are also up. Census estimates show 1987 Washington dill acreage up 107 percent from 777 acres in 1982, and production up 159 percent from the 63,263 pounds produced in 1982. State reports indicate that Hawaiian ginger root production and acreage have been trending up since the early 1980's, and production is forecast at 8.2 million pounds for the 1989 season.

According to the Census, California is also the top U.S. producer in the "all other" herbs category, which includes fresh culinary herbs such as basil, chives, thyme, and rosemary (dill and mint acreage for dried and fresh use is also reported in this category). The number of California farms producing these herbs more than doubled between 1982 and 1987, from 33 to 73; harvested area increased 29 percent to 1,675 acres, while quantity produced increased 273 percent to over 6 million pounds.

These estimates include dried herbs grown on contract with U.S. spice companies. But much of the increase in California acreage is likely for fresh herbs, reflecting the escalating demand for the fresh product. The California gain probably does not reflect the total increase, since greenhouse herb production is not estimated. California greenhouse production has been expanding to provide fresh herbs all year.

Wisconsin Grows Ginseng For Asian Market

Wisconsin is the second largest U.S. producer of herbs in the aggregate category. Wisconsin's harvested acreage increased 175 percent during 1982-87 to 1,135 acres. Quantity produced grew 178 percent to 1.1 million pounds.

However, most of Wisconsin's herb acreage is for cultivated ginseng, not culinary herbs, and most of the crop is exported to Asian countries, where it is used as a medicine.

Ginseng also grows wild in other parts of the U.S., especially in the Appalachian Mountains. Most is exported. In 1988, total U.S. cultivated ginseng exports amounted to 847,071 pounds, while wild ginseng exports reached 141,017 pounds.

Ginseng is an extremely high-value product, with recent prices reaching a high as \$51.50 per pound for cultivated ginseng and \$275 per pound for wild.

Herb Imports Increasing

U.S. imports of fresh herbs are also up, according to USDA's Animal and Plant Health Inspection Service. These imports are for both the fresh market and for processing. Total imports of 17 herbs shipped fresh into the U.S. increased to 14 million pounds in fiscal 1987, up 6 percent from 1986 and 22 percent from 1985. The largest herb imports in 1987 were garlic (7.8 million pounds), cilantro (3.6 million), ginger root (1.2 million), oregano (656,282 pounds), and parsley (529,377 pounds).

Continued improvements in marketing fresh herbs are likely. Decorative, landscaping, food, and fragrance industry uses will probably expand. And new reg-

ulations on medicinal herbs may be considered as the herb industry experiences rapid growth.

Interest in herbs has increased so dramatically in recent years that USDA began a weekly report on the herb market this year. The first "National Wholesale Herb Market News Report" was issued on May 3, and is available from the Chicago Market News office. Call (312) 353-0111 for details. [Cathy Greene (202) 786-1886]

Triticale: Has Its Time Finally Come?

Triticale is a high-yielding blend of wheat and rye. Its origin is shrouded, but it has been around for over 100 years. While almost unknown in the U.S., triticale is planted on several million acres worldwide.

Many of the genetic difficulties that have plagued triticale over the years have been overcome, though uniform end-use characteristics are still something of a problem. Newly developed dwarf and other short-stemmed varieties have taken care of lodging (stem breaking) and other harvest difficulties.

Triticale crop yields equal or surpass wheat when grown in similar settings. New varieties are quite a bit more disease resistant than early strains. Conditions seem favorable for triticale's wider acceptance.

Triticale has the potential to increase world grain production because it can be grown under conditions that are inadequate to consistently grow standard high-yielding grains. It is highly drought resistant and thrives in many marginally productive soils.

Triticale Not New

In the 19th century, as now, cross-pollination occurred naturally, notably in adjacent fields of wheat and rye. In fact, it has been a common cultivation practice in parts of Europe not to separate plots of rye, barley, and wheat. However, the resulting hybrid seeds were small and sterile. Also, yields were low, and the plants were quite susceptible to diseases. Uses of this crop were nonexistent.

In 1876, plant breeder Alexander Wilson became the first to study the crop when he cross-pollinated wheat and Scottish rye. But the result again produced sterile offspring.

In the 1950's, researchers at the University of Manitoba became interested in triticale as part of an effort to combat leaf diseases that were plaguing durum wheat. Rye's natural defenses against such diseases contributed to triticale's development as a useful crop. Triticale's sterility problem was overcome in the 1950's and seeds were developed for distribution, though many other difficulties remained.

Research on triticale also progressed in Europe. On a limited basis, some experiments took place in the U.S. as well. A big boost for serious long-term plant development came in 1964 when Manitoba and the International Maize and Wheat Improvement Center (known as CIMMYT) joined forces.

Still, research progress was very slow until the key breakthrough came about by accident. In 1967, a portion of a CIMMYT test crop in Mexico was unintentionally pollinated by dwarf bread wheats from nearby fields.

The resulting strain of triticale, known as armadillo, appeared to solve most of the crop's problems at once. The new crop was high yielding, short stemmed, disease resistant, and early maturing.

Today, although CIMMYT estimates that triticale is planted on over 4 million acres worldwide, area is relatively small in the U.S. Only 60,000 acres of both spring and winter varieties are grown here. Over two-thirds of the global triticale cropland is now made up of winter varieties in France, the USSR, and Poland. Thus, most of the current triticale is grown in developed countries on fairly good cropland. But agronomic studies indicate it also may outperform wheat and rye in marginal conditions—such as those in some food-aid countries.

Inconsistent Quality Is a Problem

Under neutral or favorable conditions, today's triticale is able to match or surpass most of wheat's key vitamin, mineral, and protein levels, although its quality is still inconsistent. Protein levels, for example, can vary by as much as 50 percent in a single year, making the crop unreliable for certain users.

Triticale, however, can produce a crop under conditions in which many wheat varieties would die. Other early triticale difficulties (few seeds, typically shriveled) recently have been overcome.

However, under marginal growing conditions, where the crop would be the most beneficial, low test weights remain a concern. Research on new varieties is underway in Mexico in the hope that flour yields for triticale and wheat grown in difficult conditions can be made equal.

Triticale's high nutritional value and milling capability qualify it as a grain that can be used for food purposes. Protein levels average over 11 percent, on par with many other cereals. In lysine, an essential amino acid that improves vegetable protein utilization in animals, it ranks better than other grains.

Triticale flour has many baking uses. These include unleavened specialty breads and other baked goods that typically rely on soft-wheat flours, such as pastas, cakes, and cookies. Triticale bread, depending on the plant variety, rises to the same level and consistency as breads made with many soft wheat strains. In the 1980's, triticale has become wholly substitutable for wheat flour in many products. Low gluten content remains a major problem for some baking uses, though.

Triticale has nonbaking food uses as well, including breakfast cereals. It is already used in many South American nations as a malting agent for beer.

It is likely that in the future, the bulk of triticale supplies will be channeled into feed uses (either as a substitute for more traditional coarse grains or as a grazing crop). Studies indicate a feed energy content for triticale lower than that for corn, but comparable to wheat and other coarse grains for most animal types.

In terms of yield and disease resistance, the forage and silage qualities of triticale can now compete with many other locally grown crops, making it cost competitive with oats, rye, barley, and wheat as an ingredient in feed rations. Some winter varieties are already used for hay on a large scale in the Southern Hemisphere.

Triticale's Future May Be Aided by Famines

Triticale is still an unfamiliar crop in most places. Further, its use would require modifying farming and milling practices.

Some growth, nonetheless, could occur soon. CIMMYT research has found triticale to be more adaptable to difficult conditions than wheat, particularly in drylands, tropical highlands, and acid soils found in many developing countries. Weather- and soil-related harvest failures in such countries could be partially avoided if more triticale acres were planted.

Lessons learned from crop-failure calamities may move growers to alter cropping patterns to include triticale. Over time, farmers, particularly in Eastern Europe, Latin America, and Africa, may well place greater emphasis on what is increasingly considered a reliable, high-yielding crop. *[James Cole and Stephanie Mercier (202) 786-1840]*

It's Easy To Subscribe to Agricultural Outlook

Agricultural Outlook presents USDA's farm income and food price forecasts. Each issue emphasizes the short-term outlook, but also presents long-term analysis of issues ranging from international trade to U.S. land use and availability. More than 50 pages of charts, tables, and text provide timely and useful information.

Agricultural Outlook is published 11 times a year. Annual subscriptions are \$22 US, \$27.50 foreign. Save money by subscribing for more than 1 year.

To subscribe, call toll free, 1-800-999-6779, or write ERS-NASS, P.O. Box 1608, Rockville, MD 20849-1608.



World Agriculture and Trade

European Developments

The Beef Hormone Ban: Limited Progress

Because more U.S. beef was shipped to the EC, the Office of the U.S. Trade Representative (USTR) in July announced a \$300,000 reduction in the U.S. retaliation against the EC hormone ban. Additional reductions are expected soon because more shipments of U.S. beef and products have entered EC ports.

These actions have reduced the 100-percent tariff imposed by the U.S. on EC pork hams and shoulders (valued at \$300,000), and may cut the tariffs on other products.

The U.S. beef shipments have been made under a May 4 interim agreement between the U.S. and the EC through a Joint Task Force on the hormone dispute. Under the agreement, the EC inspects the beef processing facility while producers self-certify that the meat is derived from animals not treated with hormones; USDA provides health certificates unrelated to the hormone issue.

Despite recent increases, shipments made under the agreement likely cannot make a sizable dent in the estimated \$100-million damage to the U.S. beef trade because of strict EC guidelines and economic disincentives.

A U.S. producer must follow a series of specific measures to qualify for beef shipments to the EC. The basic requirements include the following:

- The producer must provide a legal affidavit that the meat comes from animals not treated with hormones.
- The producer agrees to random on-site inspections by EC officials.
- Except for offals (internal organs), beef imported by the EC must be high-quality beef (HQB). It is technically difficult for producers not using hormones in feedlots to meet the Tokyo Round GATT definition of high-quality beef, which was carefully crafted to provide levy-free access to the EC for beef graded Choice or Prime.
- The slaughterhouse must be approved by the EC; this requirement has been made more restrictive by the EC's third country red meat directive, which substantially reduces the number of U.S. meat processors eligible to ship to the EC.

The producer faces the additional economic problem of the animal's smaller weight gain (in the absence of administered hormones) but unchanged feed costs. The reduction is normally 100-150 pounds compared with an animal treated with hormones, but can be less with genetically superior animals.

Large beef producers have not found it economical to keep hormone-free animals separate from the other animals, which leaves small producers to fill the gap. And small producers are less likely to have sufficient availability for buyers at the right time.

Even if the HQB quota were filled, the estimated trade damage would still be \$55-\$60 million, which could only be made up by shipments of beef offals. It would take over 5 million cattle to supply the EC offals market, and the small amount of offals available in the U.S. to date are from those animals shipped under the HQB quota and from veal calves, which the Food Safety and

Inspection Service can test randomly and certify as free of administered hormones.

Other possibilities include the shipment of offals from older dairy cows (which have not been treated with hormones); the joint task force may consider this step.

The problem still remains that testing for hormones in mature cattle is not scientifically possible. Even if testing were possible, testing offals would be prohibitively expensive. Although the Joint Task Force will continue to search for solutions, the outcome is more likely to be a trickle, not a flood, of U.S. beef and beef products to the EC. [David Kelch (202) 786-1610]

EC Indecision Continues on Bovine Somatotropin (bST)

The EC Commission and Council of Ministers are debating a proposal to ban the use of bST, also known as bovine growth hormone, for 18 to 24 months to permit further study. BST is a naturally occurring hormone. When cows' natural bST is supplemented by injections of bST produced by a biotechnology process, they give more milk.

U.S. companies developed bST and are now ready to market it. It has been approved for use in India, Czechoslovakia, and the Soviet Union. The U.S. companies that have bST ready to market do not want the EC to delay approval, because they have said that such a delay would allow European firms and other competitors to catch up.

The U.S. dairy industry wonders whether the EC would ban imports of dairy products from bST-using countries if bST were made illegal in the EC. At stake are \$25 million of U.S. dairy product exports to the EC (1988/89 value). In 1989, about half of U.S. dairy product exports to the EC have been nonfat dry milk.

The Food and Drug Administration has not yet approved bST use for the U.S. and may not decide in 1990. The EC decision process is independent of the U.S. decision, although a favorable outcome in the U.S.—that is, FDA approval and consumer acceptance—might calm EC fears of consumer rejection.

There is resistance in the EC to approval of bST on at least three counts:

- Farmers in some countries, most apparently in Britain and the Netherlands, fear that the resulting increase in milk per cow would force some producers out of business.
- If consumers do not trust the safety of dairy products from cows administered bST, dairy sales could fall.

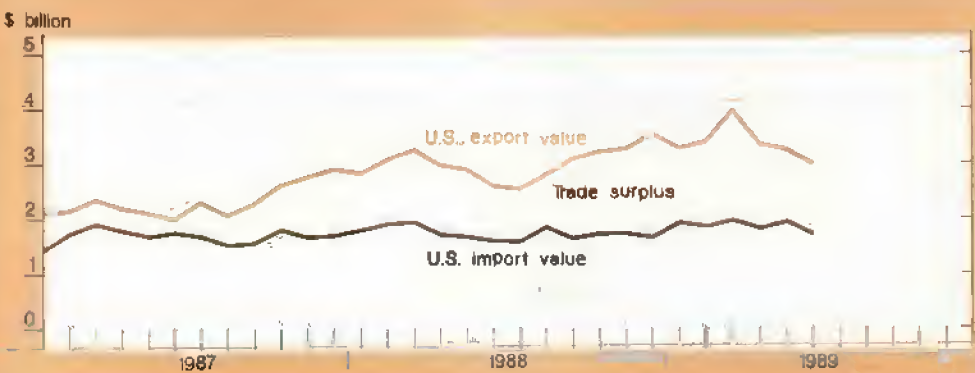
- Approving bST would raise an apparent contradiction with the beef hormone ban, in which even naturally occurring hormones cannot be administered to meat animals.

Weighing against these arguments are four points in bST's favor:

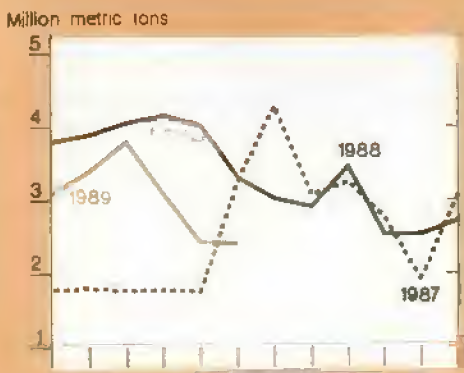
- No decisive health or technical problems have appeared that would bar its approval on normal criteria used in the EC. The growth hormone so far has met the three normal EC criteria of safety, quality, and efficacy. However, bST opponents have raised a "fourth hurdle" of social and economic effects.
- Efficiency gains would cut milk production costs.
- The EC is a net exporter of milk products, so it fears becoming less competitive in international markets by forsaking the cost-saving bST that its competitors may adopt.
- By banning bST, the Community would discourage research and development of other biotechnology. [Steve Neff (202) 786-1610]

U.S. Agricultural Trade Indicators

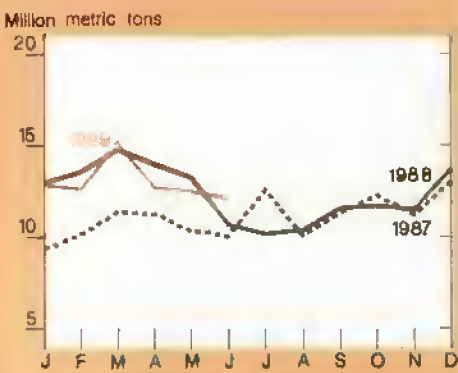
U.S. agricultural trade balance



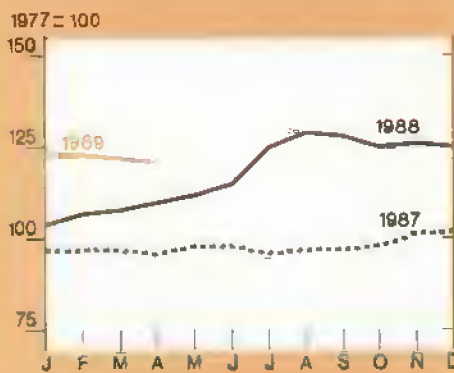
U.S. wheat exports



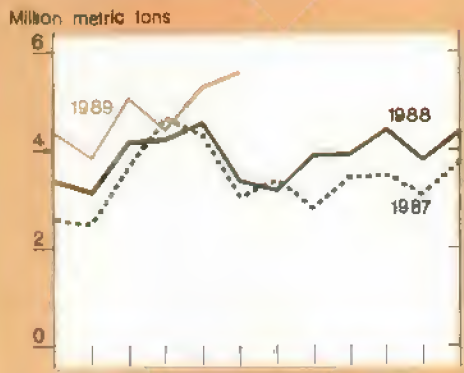
Export volume



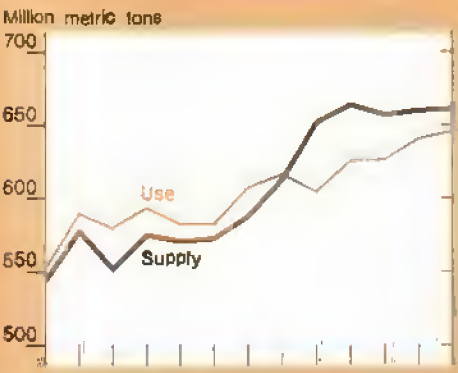
Index of export prices



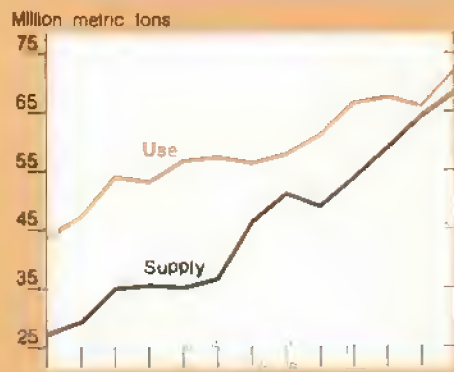
U.S. corn exports



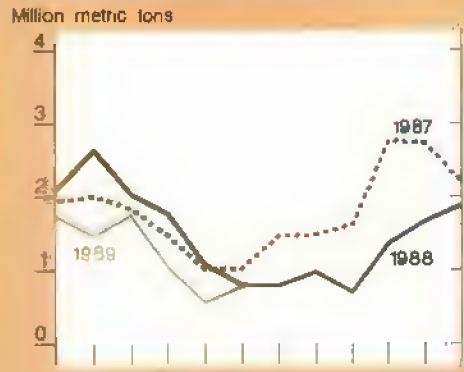
Foreign supply & use of coarse grains



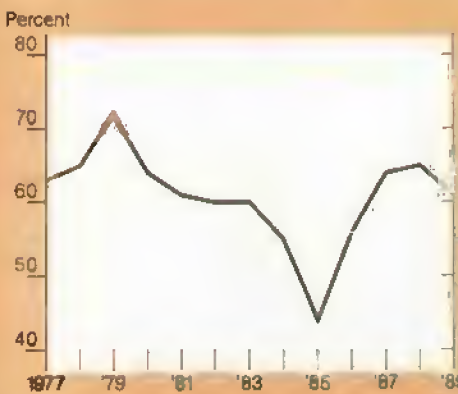
Foreign supply & use of soybeans



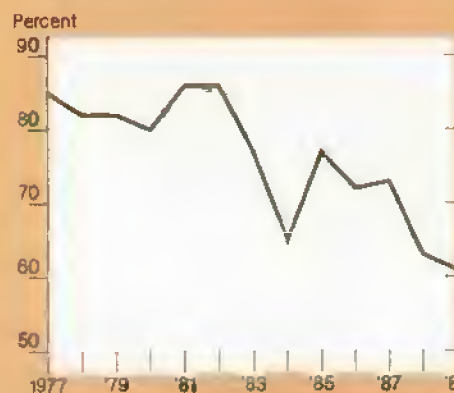
U.S. soybean exports



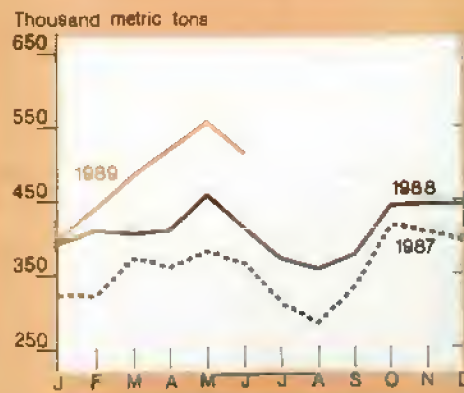
U.S. share of world coarse grains exports^{1,2}



U.S. share of world soybean exports^{1,2}



U.S. fruit & vegetable exports³



¹Excluding intra-EC trade. ²October-September years.

³Includes fruit juices.

EC Set-Aside Program Off to a Slow Start

The EC Commission has recently reported that 434,310 hectares (1.1 million acres) were enrolled in national cropland set-aside programs in 1988/89. This is less than 1 percent of arable land in the EC, compared with nearly 18 percent of total U.S. cropland diverted under acreage reduction and long-term conservation programs during 1988/89.

Last February, the EC's Council of Ministers approved a plan designed to reduce cereals surpluses by paying farmers to remove all or part of their arable land from production. Although all member countries are required to implement set-aside programs, farmer participation is voluntary. Payments offered to participants range from 100 ECU's per hectare (\$48 per acre) to 600 ECU's (\$287). National governments are responsible for administering the program, and bear part of the costs.

Three countries account for 88 percent of total EC land set aside to date. West Germany, the largest participant, set aside 169,729 hectares. Italy set aside 155,606 and the United Kingdom 54,779. Results for the other member countries are significantly lower.

The Commission attributes the disappointing response in some countries to delays in implementing the scheme, inadequate efforts to inform farmers of the program's benefits, and premiums that do not effectively compensate farmers for removing land from production. Nevertheless, the Commission describes the program as being modestly successful and estimates that it reduced EC cereals production by 1 to 2 million tons in 1988/89.

In an effort to reach its goal of withdrawing 1 million hectares from production in 1990, the Commission has proposed increasing the EC contribution to the program by 32 million ECU's (\$35.6 million). This would bring EC spending on the program for 1990 up to 172 million ECU's (\$191.2 million).

The Commission also has recommended that member nations be required to ensure that the programs are well publicized, and that technical and administrative assistance be provided to farmers. [Michael Herlihy (202) 786-1610]

National Set-Asides in EC Total Less Than 1 Percent

| Country | Premiums | Area set-aside | Share of arable land set aside |
|----------------|----------------|----------------|--------------------------------|
| | ECU/hectare 1/ | Hectares | Percent |
| West Germany | 300-600 | 169,729 | 2.4 |
| Italy | 380-550 | 155,606 | 1.8 |
| United Kingdom | 270-300 | 54,779 | 0.9 |
| Spain | 100-300 | 34,229 | 0.3 |
| France | 130-350 | 15,707 | 2/ |
| Netherlands | 600 | 2,621 | 0.3 |
| Ireland | 220 | 1,310 | 0.1 |
| Belgium | 170-420 | 329 | 2/ |
| Greece | 100-250 | na | na |
| Luxembourg | 220 | na | na |
| EC total | -- | 434,310 | 0.9 |

na = not available; -- = not applicable.

1/ 1 ECU = \$1,1115, average January-May 1989; 1 hectare = 2.47109 acres.
2/ Less than 0.1 percent.

Source: Commission of the European Communities.

Austrian Membership in EC Could Affect U.S. Farm Trade

After some debate, Austria has decided to apply for membership in the European Community, influenced largely by the EC's efforts to create a single market by 1992. In 1987, over 60 percent of Austria's exports were destined for the EC, and 68 percent of its imports originated there. Food and agricultural imports from the U.S., valued at \$84.2 million, accounted for only about 4 percent of Austria's total agricultural imports.

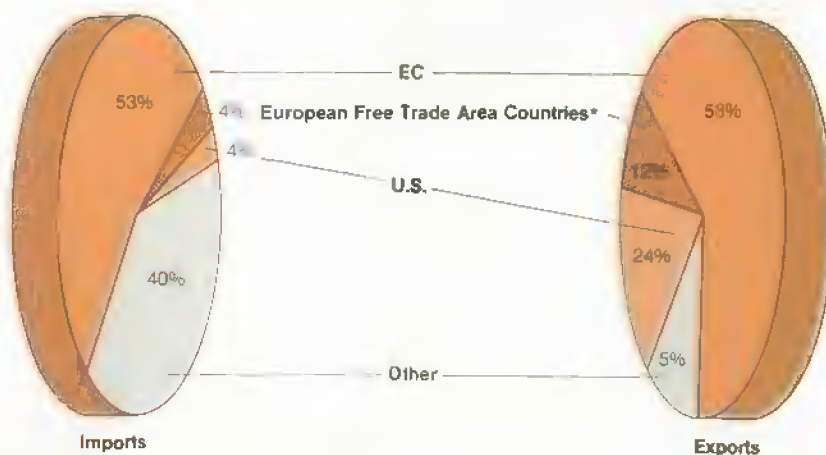
By joining the EC, Austria would not be throwing open its market for agricultural products from outside the EC. On the contrary, some trade could be diverted from the U.S.

In particular, U.S. rice exports (\$7.9 million in 1987), which now enter Austria duty free, would be subject to the EC variable levy. Also, imports of high-quality U.S. beef products (\$9 million) might be hurt by a reduced import quota or the EC hormone ban.

Austria's admission by Brussels is not certain and it probably will not be decided until after 1992. While Austria's stable currency and established trade links with Eastern Europe are in its favor, the country's neutrality could pose a problem for the EC's long-term goal of political unity.

For the U.S., Austrian accession probably would not provoke the same degree of trade friction with the EC as the accession of Spain and Portugal did. [Mary Madell and Kenneth Weiss (202) 786-1610]

Most of Austria's Agricultural Trade Is With the EC



*Finland, Iceland, Norway, Sweden, & Switzerland.

Exports Higher in Fiscal 1989, Slipping in 1990

U.S. agricultural exports likely reached \$40 billion in fiscal 1989 (October-September), a \$4.7-billion increase from fiscal 1988. This would be the highest since 1981's record \$44 billion, as higher prices offset a slight decline in volume.

But, as prices retreat from drought-induced highs and foreign competition intensifies, export value and volume are expected to slip in fiscal 1990.

Both bulk and high-value exports probably were greater in fiscal 1989, but high-value exports likely reached a record. High-value exports probably climbed \$1.9 billion, compared with a \$2.6-billion gain in 1988 and \$1.2 billion in 1987. As in preceding years, animal products accounted for the largest share of this gain, with a \$550-million increase likely in fiscal 1989.

Much of the growth in U.S. animal product exports during the last 2 years has resulted from rising imports by Mexico and Japan. U.S. animal product exports rose more than \$1 billion in 1988, and Japan and Mexico accounted for about 80 percent of the rise. Similarly, they accounted for virtually all the \$680-million increase during the first 10 months of fiscal 1989.

The value of U.S. animal product exports to Japan grew \$392 million during the first 10 months of fiscal 1989, largely because of expanded beef sales. U.S. beef has done extremely well in the Japanese market, continuing to gain market share partly at the expense of Australian beef, and accounting for much of Japan's increased imports.

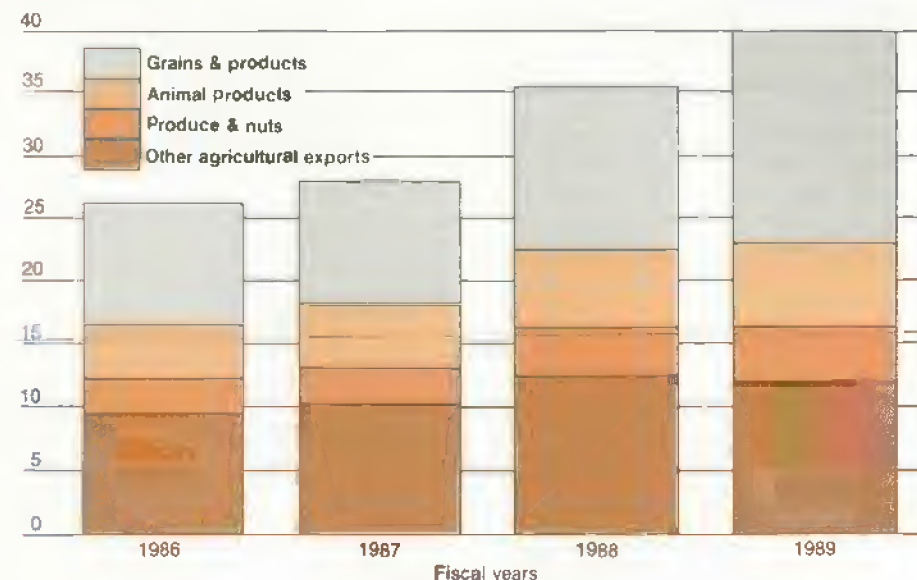
U.S. pork exports to Japan have also been rising as Japan's own production falls. U.S. poultry meat exports to Japan likely grew as well, exceeding fiscal 1988's record, because of continued strong demand and reduced local production.

Beef Agreement, High Yen Help U.S. Exports

Japan's meat imports have been rising strongly in recent years. Export growth

Grain Export Value Climbs in 1989

\$ billion



1989 forecast

has been facilitated by Japan's agreement last year to raise its quota for beef imports by 60,000 tons annually, and by its tariff reductions on poultry imports. However, liberalization has not been the only factor; U.S. sales of nonquota beef to Japan, such as diaphragm meats, have increased.

A robust Japanese economy has fueled income growth; a strong yen has helped reduce the local cost of many imported goods, and the cost of importing meat has fallen faster than the cost of producing meat locally. Japan imports all but 2 percent of its animal feed, and marketing arrangements, including price stabilization, prevented a complete transmission of potential cost savings from cheaper imported feed.

Exports to Mexico Rising

In contrast to Japan, Mexico's currency and income growth have not been encouraging for imports. Instead, efforts to fight inflation have been the impetus behind increased imports of animal products and other agricultural goods during 1988 and 1989. The Mexican government recently announced an extension of its Economic Solidarity Pact, promising to control food and other prices in exchange for wage restraint.

However, Mexican producers withheld local livestock products in response to the price controls. Part of the

government's strategy to control inflation is to import food products, thereby restraining price increases and ameliorating shortages. Food items under price controls include milk, eggs, beef, corn tortillas, and wheat bread; U.S. exports of many of these products increased significantly in fiscal 1989.

Shipments of other products have risen as well under a more liberalized Mexican trade regime. Substituting tariffs for import license requirements has increased the access to foreign products in Mexico. U.S. agricultural sales to Mexico rose by \$1 billion during the first 10 months of fiscal 1989.

Import liberalization in other countries is also helping U.S. high-value exports. U.S. produce exports likely climbed \$500 million in 1989 to a record \$4.3 billion. Much of the gain is concentrated in East Asia, where import liberalization and income growth are encouraging sales.

Bulk Exports Led 1989's Growth

U.S. bulk agricultural exports probably increased \$2.8 billion in fiscal 1989, almost \$1 billion more than the likely gain for high-value exports. Higher prices for grains and oilseeds have more than offset the small aggregate decline in export volume that followed drought-reduced U.S. crops.

U.S. agricultural export volume in fiscal 1989 probably fell only 1.3 million tons to 147 million tons. A likely 9-million-ton increase in coarse grain exports virtually offset reduced wheat, soybean, and soybean meal shipments.

Coarse grain sales have climbed because of record sales to the Soviet Union—an 11-million-ton gain through the end of August. This is offsetting lower exports to Japan, North Africa, the Middle East, and Latin America.

The Soviet Union's imports of coarse grains hit a record in fiscal 1985, but U.S. exports have been higher in 1989, since competing producers have not had the supplies to meet Soviet demand. With coarse grain volume up, and prices averaging more than 20 percent higher, fiscal 1989 U.S. coarse grain exports probably will increase \$1.3 billion.

Soviet 1989/90 imports from all sources could drop in response to a rebounding domestic crop. And foreign competitors also are expected to harvest larger crops. Thus, the volume of U.S. coarse grain exports is forecast to decline in fiscal 1990, as are export prices.

U.S. Wheat Exports Lower in 1989

Wheat exports probably shrank in fiscal 1989. As with coarse grains, the Soviet Union is the largest source of the change. Fiscal 1988 wheat exports to the USSR were a record 9 million tons. But, following a better Soviet crop, 1989 exports likely held under 6 million tons. U.S. wheat exports also were probably lower to Eastern Europe and Latin America, but larger exports to Pakistan and China helped offset these losses.

U.S. wheat exports likely finished fiscal 1989 about 3 million tons below fiscal 1988's 40 million, but with prices driving export value \$1.5 billion higher.

In fiscal 1990, world wheat prices are likely to remain stronger than corn or soybean prices. However, probable changes in U.S. export volume are less clear, since Northern Hemisphere harvests will begin midway through the fiscal year. Declining U.S. wheat exports and continued record EC exports are forecast on a crop-year basis, but the fiscal year could vary.

Fiscal 1989 soybean exports fell with reduced world trade and record competitor exports. Although world trade and U.S. exports are expected to rise in 1990, competitors may capture most of the gain, and U.S. export volume is not expected to increase by as much as prices fall.

The only bulk export likely to continue gaining in value in fiscal 1990 is cotton. U.S. cotton exports may be up only \$100 million in fiscal 1989, to \$2.2 billion, but cotton is ending the fiscal year in a far more competitive position than it held at the beginning.

With increased foreign consumption boosting import needs well above anticipated foreign export supplies, the volume of U.S. cotton exports is likely to grow substantially in fiscal 1990, with value higher as well.

U.S. Dollar Stronger on Foreign Exchange Markets

Despite improved cotton exports, the outlook is for a drop in U.S. bulk exports in fiscal 1990. Fiscal 1989 bulk product exports probably reached \$22 billion, an \$8-billion gain over 3 years of growth. During fiscal 1990, only a small portion of this gain is likely to be lost, but probably enough to bring total export value lower.

Gains in high-value exports are likely to shrink in 1990 compared with recent years, because of changes in exchange rates and economic growth. The dollar probably has entered fiscal 1990 above a year earlier in real foreign exchange terms. This would be the first such increase since fiscal 1985, and combined with the prospect of slower GNP growth overseas, implies weaker prospects for exports in 1990. *[Stephen MacDonald (202) 786-1822]*



Farm Finance

A Look at Farmers Leaving Farming

During the 1980's, farmers went through a cost-price squeeze, saw one-third of their land value evaporate, and had to work out a massive debt overhang. Yet USDA data suggest that farm numbers fell more in each of the 3 previous decades than in the eighties. Further, some surveys show that farmers' bankruptcy filings are down by 50 percent from this decade's high, which was in 1986.

Structural changes in farming in the 1980's reflect a continuation of historical trends, but at slower rates than in earlier decades that saw huge technological changes. By the 1970's, many of the productivity increases from mechanization and chemical use had already been made.

By the beginning of the 1980's, farm numbers were down, farms larger, production more concentrated, and capitalization greater than ever before; much structural change had already occurred in farming. Farm numbers declined by 266,600 during 1980-89, compared with 1.7 million during the 1950's, 1 million in the 1960's, and 516,600 during the 1970's.

But medium-sized commercial farms made up a bigger proportion of farms disappearing in the 1980's than in the earlier decades.

Although there are no exact national numbers on the rates of farm failure, some observers believe that the farm exit rate was 5 to 6 percent per year in the period of peak farm financial stress during the mid-1980's, with financial failure accounting for about half.

In a normal year, 3 to 4 percent of farm operators cease farming for a variety of financial and personal reasons. Since the mid-1980's, the exit rate has dropped back to the historical norm as the financial picture has brightened.

Best estimates suggest that some 200,000 to 300,000 farmers left farming for financial reasons between 1980 and 1988, representing 8 to 12 percent of all farmers at the beginning of the decade (or an annual average rate of 0.9 to 1.4 percent).

The number of exits from farming in the 1980's was slowed by a variety of Federal and State programs and policies; many were specially introduced in response to the farm financial crisis. Generally rising farm incomes, debt restructuring, and land value appreciation since 1986 signaled the end of the crisis. The current outlook is for no new surge of farm sector exits.

Lack of Hard Data Hinders Analysis

The concern with farm financial stress has often been stated in terms of increased farmer exits from agriculture because of bankruptcy, foreclosure, or other involuntary reasons. But there is no direct measure of how many farmers actually leave (or enter) each year. Farm numbers show the net change.

Even if there were detailed data on farm bankruptcies, challenges to analysis would remain, since farm financial stress may induce farmers to sell or transfer land voluntarily to avoid foreclosure.

Despite the lack of data, there is some related information suggesting that while farm failures are serious for those directly involved, they have little impact on the sector as a whole.

The higher rate of foreclosures and bankruptcies in the 1980's has been used to

Financial Stress in Agriculture as Reported by U.S. Farm Banks, 1982-88 1/

| Item | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 |
|---|------|------|------|------|------|------|------|
| Percent | | | | | | | |
| Farm borrowers who had bank financing discontinued (during year ending in June) | 3.3 | 2.9 | 3.4 | 4.5 | 5.6 | 3.2 | 1.7 |
| Farm borrowers banks expect to discontinue (during year ending next June) | 4.4 | 2.0 | 3.1 | 5.7 | 6.7 | 2.1 | 1.5 |
| Banks' farm borrowers loaned up to practical limit in June | 31.9 | 28.1 | 32.8 | 36.7 | 38.8 | 28.8 | 22.6 |
| Farmers in bank lending area who went out of business (year ending June) | 2.2 | 2.3 | 3.6 | 4.8 | 6.2 | 4.6 | 2.8 |
| Liquidation categories (sum equals 100 percent) | | | | | | | |
| Normal attrition | na | 37.7 | 31.3 | 27.7 | 28.9 | 38.4 | 50.2 |
| Voluntary liquidation | na | 42.4 | 44.0 | 44.3 | 41.7 | 35.8 | 30.6 |
| Legal foreclosure | na | 18.1 | 22.3 | 25.8 | 26.3 | 23.6 | 17.7 |
| Other | na | 1.8 | 2.4 | 2.2 | 3.1 | 2.3 | 1.6 |
| Banks' farm borrowers who filed for bankruptcy (year ending June) | na | na | na | 1.5 | 2.2 | 1.4 | .7 |
| Farmers in bank lending area who filed for bankruptcy (year ending in June) | .8 | 1.1 | 2.6 | 3.8 | 4.2 | 3.3 | 2.2 |

na = not available. 1/ Data are unweighted averages of responses to the American Bankers Association midyear farm credit survey, which uses a stratified random sample.

suggest that the number of farms is dropping, but two additional factors must be considered.

First, using gross exits alone, without considering entries, reveals little about changes in farm numbers. Second, total exits may not move in tandem with involuntary exits. Voluntary exits may decline in a period of financial stress, as farmers contemplating retirement and others with the ability to wait for improved conditions hold their land off the market.

Some displaced farmers with good management skills re-enter the sector, renting a large share of their land and equipment. This type of transition likely increased in the 1980's.

Bankers Say Financial Stress Worst in 1985-86

A midyear farm credit survey of agricultural commercial banks conducted by the American Bankers Association (ABA) provides some information on the incidence of farmers' financial stress and on how many farmers leave farming. To qualify as a farm bank for the survey, an institution had to have more than \$2.5

million lent out in farm production and farm real estate loans, or more than half of its loans to farms.

The bankers likely focus on commercial-sized farms that are viewed as actual or potential customers, omitting small operations that meet the Census definition of a farm (\$1,000 or more annual sales). Thus, the stress rates should not be multiplied by the total Census number of farms, but instead viewed as relative indicators of stress through time.

Bankruptcies Likely Peaked in 1986

According to the survey, the worst financial stress in agriculture occurred in 1985-86. The respondents quit lending to 5.6 percent of their farm borrowers during the year ending June 1986, after dropping 4.5 percent of their farm borrowers in 1985. In another measure of creditworthiness, the proportion of farm customers who had borrowed up to their practical limit peaked at 38.8 percent in mid-1986; for comparison, as of mid-1988 only 22.6 percent were at the limit.

Agricultural bankers estimated that 6.2 percent of farmers in their lending areas

Number of U.S. Farms, Land in Farms, and Average Farm Size, 1910-89

| Year | Number of farms | Land in farms | Average farm size | Period | Change | | |
|------|-----------------|---------------|-------------------|---------|-----------------|-------|---------------------|
| | | | | | Number of farms | | |
| | 1,000 | Mill. acres | Acres | | 1,000 | % | Av. annual % change |
| 1910 | 6,406.2 | 878.8 | 137 | --- | --- | --- | --- |
| 1920 | 6,517.5 | 958.7 | 147 | 1910-20 | 111.3 | 1.7 | 0.17 |
| 1930 | 6,545.6 | 990.1 | 151 | 1920-30 | 28.1 | 0.4 | 0.04 |
| 1940 | 6,349.8 | 1,065.1 | 168 | 1930-40 | -195.8 | -3.0 | -0.30 |
| 1950 | 5,647.8 | 1,202.0 | 213 | 1940-50 | -702.0 | -11.1 | -1.11 |
| 1960 | 3,962.5 | 1,175.6 | 297 | 1950-60 | -1,685.3 | -29.8 | -2.98 |
| 1970 | 2,949.1 | 1,102.4 | 374 | 1960-70 | -1,013.4 | -25.6 | -2.56 |
| 1980 | 2,439.5 | 1,038.9 | 426 | 1970-80 | -509.6 | -17.3 | -1.73 |
| 1989 | 2,172.9 | 991.5 | 456 | 1980-89 | -266.6 | -10.9 | -1.21 |

Sources: All data derived from USDA, NASS except for 1910-40 land in farms, which were obtained from the U.S. Census of Agriculture.

went out of business during the year ending June 1986, up from 4.8 percent a year earlier. About 68 percent of those exiting in 1986 were thought to have left because of liquidation or foreclosure, slightly less than the 70 percent of 1985.

The bankers estimated that 4.2 percent of local farm operators filed for bankruptcy during July 1985-June 1986, compared with 3.8 percent reported for July 1984-June 1985. They also reported the highest bankruptcy rate for their own customers, 2.2 percent, during July 1985-June 1986.

Farm Numbers Drop 10.9 Percent During 1980-89

The 10.9-percent drop in total farm numbers from 1980 through 1989 is comparable to the 1940's, when 11.1 percent left the sector. In intervening decades, relative declines were much greater. Average farm size increased only 7 percent during 1980-89, the lowest rate of increase since the 2.7 percent of the 1920's. This compares with the record 39.4-percent increase recorded in the 1950's.

Changes in the distribution of farms based on both per-acre size and annual sales show that the decline in farm numbers was concentrated in middle-sized operations. Both small noncommercial farms, with family members earning a large share of their income from off-farm sources, and large commercial farms are increasing as a proportion of all farms.

The 1980's farm financial crisis was more a challenge of absorbing large losses in land values than an income

problem. Farmers who incurred large debts to expand in the late 1970's found their financial position undercut by declining land values in the 1980's. Some of the farmers could support their debts only when land values were rising.

When land values fell, debt often exceeded asset values, and the farmers often could not get more credit or support their existing debt. Farmers' financial positions were thus extremely diverse, with farms of all sizes becoming insolvent.

The failure of significant numbers of larger farms in the 1980's differs from the attrition patterns from farming for the preceding decades. But with land values now increasing, the number of farms going out of business is down. [Jerry Stam (202) 786-1892]

Final estimates for 1988 show that farmers' net cash income was almost \$60 billion, a gain of \$2.2 billion (4 percent) from 1987. The combination of drought-induced higher commodity prices, large stocks going into the drought, and Federal disaster assistance pushed up the aggregate cash income indicator. Net cash income measures, for a calendar year, the sales of commodities, direct Government payments, and other farm-related income such as cash from custom farm work, less cash outlays.

In 1989, net cash income could decline \$3-\$8 billion (5-13 percent). After adjusting for inflation, net cash income (measured in 1982 dollars) is likely to be down compared to the previous 3 years, but still higher than in 1985.

Commodity receipts are expected to grow by \$6 billion this year, but the gain will be partially offset by a \$4-billion decline in direct Government payments. Crop production is up this year, but only commodities sold before the end of the calendar year will contribute to 1989 cash receipts. Cash production expenses will probably increase by \$1 billion more than commodity receipts. So net cash income could slip by \$5 billion.

Net Farm Income Increasing

Net farm income measures the value of the current year's production, plus Government payments, less total costs. Last year's drop in production lowered net farm income by 3 percent from 1987. With crop production ahead of last year's drought-reduced level, net farm income could increase by 5 to 16 percent this year, to between \$48 and \$53 billion. Measured in inflation-adjusted dollars, 1989 net farm income could match 1987's \$40 billion, the highest since 1975.

Direct Government Payments Down This Year

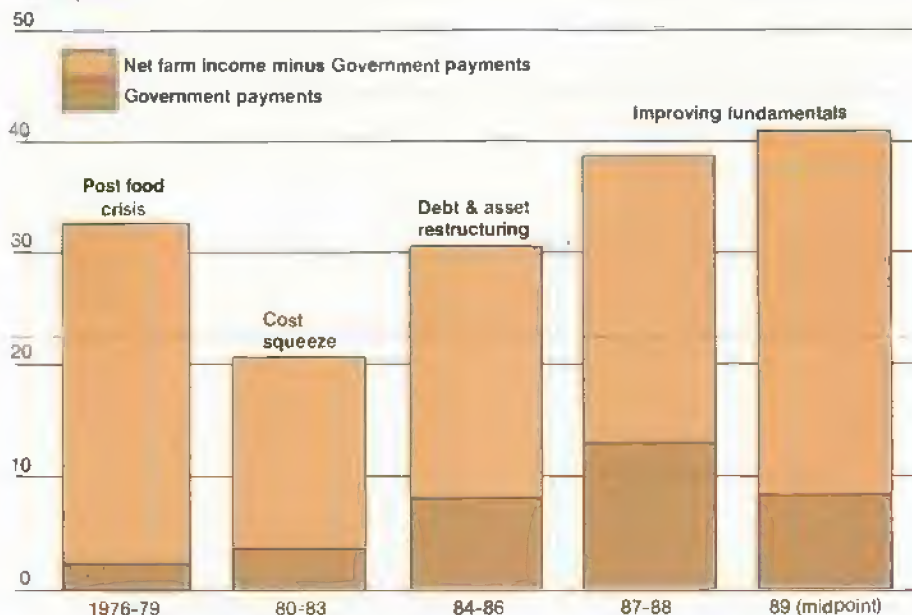
Direct Government payments for 1989 may be as much as \$4 billion less than last year, down by one-fourth. Cash deficiency payments likely will be higher for practically all program crops. However, payments made with commodity certificates will be almost negligible compared to 1987 and 1988. In 1987/88, about half of all deficiency payments were made with certificates.

Total deficiency payments for wheat, corn, and sorghum this calendar year could drop by \$5 billion. Wheat payments will be lower, as reduced stocks keep prices relatively strong. Corn and sorghum payments made in March for the 1988/89 crop year were down 95 percent from a year earlier, reflecting drought-induced high prices.

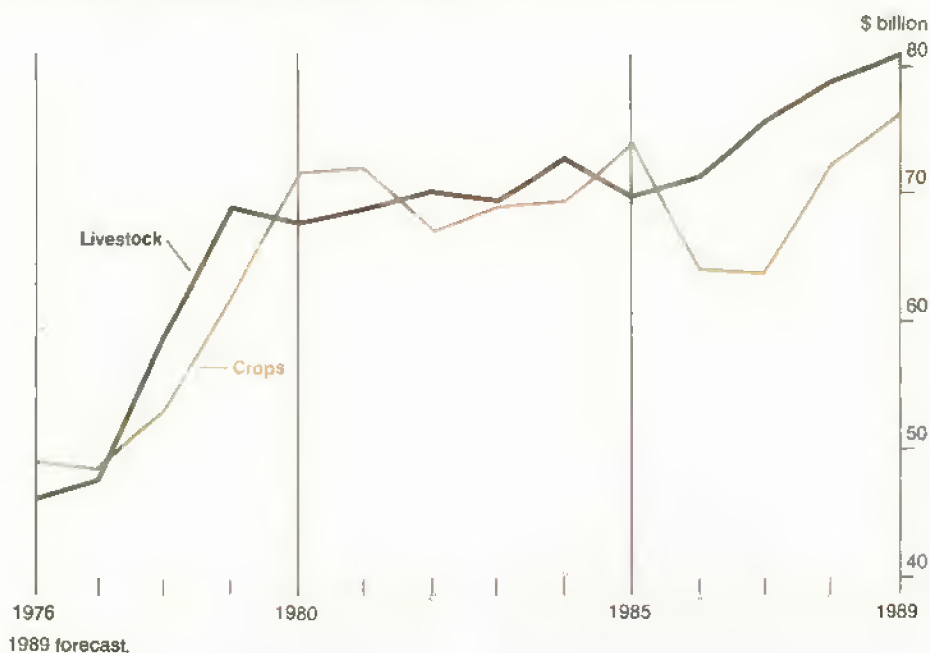
Participation in the 1989/90 programs is down 7 to 14 percent from a year earlier for wheat, corn, and sorghum, but is unchanged for rice and cotton.

Net Farm Income Is Rising, Even With Lower Government Payments

\$ billion (1982)



Farm Cash Receipts Continue To Rebound



Rice and cotton deficiency payments together may rise nearly \$1 billion, even though target prices for 1989/90 rice and cotton are lower. Deficiency payments for these two crops are expected to show an increase in 1989 because 70-85 percent of 1988/89 crop payments are made this calendar year.

Conservation Reserve Program payments and disaster assistance are two types of

direct payments that are unlikely to decline during calendar 1989. During the eighth signup period for the Conservation Reserve Program (which ended in February), another 2.5 million acres were enrolled, bringing the total to 30.6 million. Rental and cost-share payments could exceed last year's by almost \$200 million.

The Disaster Assistance Act of 1988 provided \$1.3 billion in direct payments in

calendar 1988 and another \$2.3 billion during 1989. An additional \$580 million may be dispersed in 1989 as part of this year's \$897-million disaster assistance program.

Crop Cash Receipts Climbing About 5 Percent

Crop cash receipts may be 5 percent (almost \$4 billion) above 1988, because of relatively strong prices and tighter supplies. Receipts are up more than 10 percent for wheat, corn, and vegetables. However, rice, soybean, and fruit cash receipts may be down for 1989.

Despite drought damage to the winter wheat crop, total wheat receipts are expected to be almost \$1 billion more than last year. Production estimates for all wheat are 14 percent over 1988/89, reflecting higher spring wheat output. The season-average wheat price may be up 3-13 percent. Moreover, the calendar-year average price, which is used to estimate annual cash receipts, is almost 20 percent above 1988.

Feed grain cash receipts show gains of at least 15 percent in both 1988 and 1989. Despite adverse weather in parts of the Corn Belt, feed grain production is forecast up 45 percent from last year.

Corn stocks are expected to fall during the 1989/90 crop year as use exceeds production. Season-average prices are expected to be lower for the 1989/90 crop year. However, corn and sorghum receipts in calendar 1989 reflect the higher 1988/89 crop year prices.

Cash receipts for all vegetables could be up more than 10 percent this year. Aside from potatoes, vegetable production is up 12 percent; the price index is projected to be 3 percent above 1988.

Rice receipts could decline about 15 percent this year. Rice production is expected to be down slightly, and the season-average price probably will not increase enough to keep the calendar-year price above the 1988 average.

Soybean prices are expected to be lower for 1989/90, following a production gain of at least 20 percent and an expected drop in use. However, calendar 1989 prices are influenced by last season's relatively higher prices, so annual soybean

cash receipts may dip 5-10 percent. Fruit cash receipts could be down 5-10 percent with lower prices and generally stable production.

Livestock Receipts Likely Stable

Total livestock receipts are expected to be relatively stable in 1989, with an expected gain of less than 4 percent to about \$80 billion. Cattle and calf receipts may be up 3 percent, hog receipts down 3 percent, and dairy receipts up 4 percent.

Farm prices and production of cattle, calves, and hogs will probably all change by less than 5 percent in 1989. Beef production will probably decline and farm prices rise, while hog prices fall and production increases slightly. Milk production is projected to be about the same as in 1988, with a 5-10 percent increase in average annual price pushing up cash receipts.

Cash receipts from all poultry and eggs could be up about 5 percent in 1989, following a 12-percent gain in 1988. Broiler receipts could show a 7-percent increase over 1988, while turkey and egg receipts could show a more modest 3-percent growth. Higher prices and produc-

tion are forecast for boilers and turkeys for 1989. Egg production probably will drop slightly and the average farm price will rise.

Cash Production Expenses Growing More Slowly in 1989

Cash production expenses increased 7 percent in 1988 and are expected to increase 3-6 percent in 1989. Total production expenses rose 6 percent in 1988 and could climb another \$4-\$8 billion, or 3-6 percent, in 1989.

Higher prices, rather than more use, are responsible for the increase in feed expenses. Slight price gains underlie the change in feeder livestock expenditures, while seed expense is elevated by both price and quantity increases. Most of the manufactured inputs show higher prices and increased use because more acres were planted this year and more are being harvested than in 1988. However, higher prices appear to explain most of the change in pesticide expenses.

Interest expense could increase as much as 10 percent for 1989, following 6 years of declines. Short-term interest expense, for debts not secured by real estate, likely has grown. But long-term interest charges, for real estate debt, continue to

decline in 1989. Average short-term market rates likely are higher in 1989, and more operating loans usually accompany increases in planted acres and production.

Average rates on outstanding real estate loans probably are lower in 1989, as new loans replace old. Although debt levels may be unchanged at the end of 1989, interest expense estimates are based on midyear debt levels. Real estate debt in mid-1989 may have been \$2 billion less than in mid-1988. [Diane Bertelsen and Andy Bernat (202) 786-1807]

Farm Income Forecast Errors

USDA's farm income forecasts are made monthly throughout the year. The first forecast for the next calendar year is made at the Outlook Conference in the late fall. The forecast is revised each succeeding month until final estimates are made approximately 18 months later.

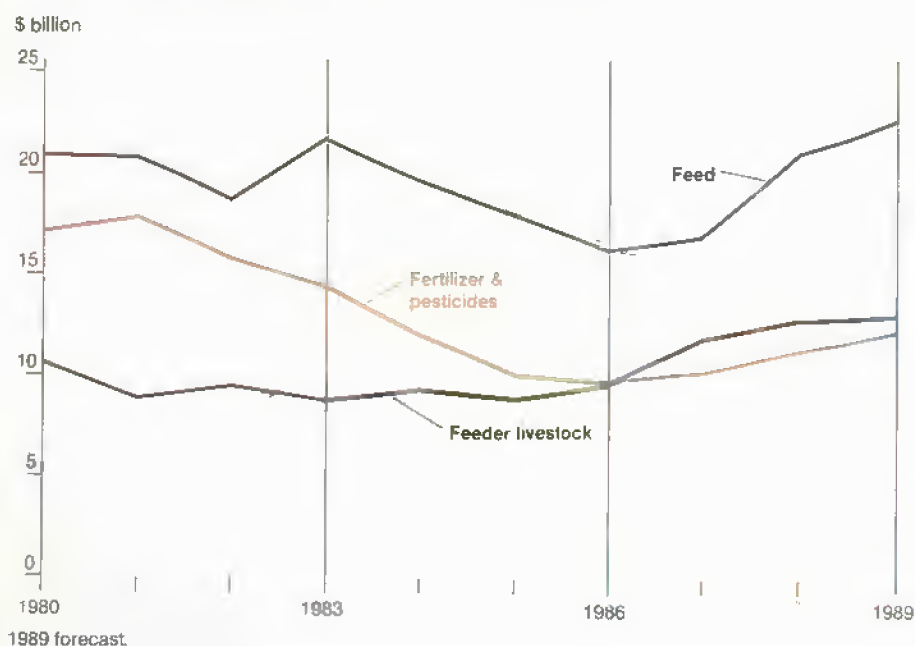
Every quarter, forecasts are published in both *Agricultural Income and Finance* and *Agricultural Outlook*. Final income estimates for 1988 have recently been completed, and it is now possible to assess the accuracy of the farm income forecasts for the last 7 years.

An accompanying table ("Average Dollar Differences...") presents the average absolute errors of the Outlook Conference forecast, and of the average forecasts for each of the 6 subsequent quarters, for 1982-88. The forecast error is the absolute value of the difference between the final estimate and the forecast.

It should be emphasized that the final estimate used in this comparison is not made until the summer following the year in question. It is a final estimate in that it is no longer subject to monthly or quarterly revisions.

However, the final estimates are still subject to change, albeit on a less frequent basis. For example, major revisions in the income data series may be made next year after the results of the 1987 Census of Agriculture are in.

Some Production Expenses Rising More Slowly This Year



Average Dollar Differences Between Forecasts and Final Estimates, 1982-88

| | Outlook Conference | 1st qtr. | 2nd qtr. | 3rd qtr. | 4th qtr. | 5th qtr. | 6th qtr. |
|------------------------|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| \$ billion | | | | | | | |
| Cash receipts | 5.2 | 5.1 | 4.8 | 3.1 | 3.2 | 1.9 | 0.8 |
| Crops | 3.8 | 3.3 | 3.5 | 2.6 | 2.7 | 1.3 | 0.4 |
| Livestock | 3.0 | 2.6 | 1.7 | 0.9 | 1.0 | 2.6 | 0.6 |
| Direct Gov't. payments | 3.2 | 1.6 | 0.7 | 0.7 | 0.3 | 0.7 | 0.2 |
| Gross cash income | 6.1 | 6.5 | 5.6 | 4.1 | 3.9 | 2.5 | 1.3 |
| Nonmoney income | 1.3 | 1.1 | 1.0 | 0.9 | 0.6 | 0.6 | 0.5 |
| Inventory adjustment | 3.4 | 2.9 | 2.7 | 2.3 | 1.8 | 1.9 | 1.2 |
| Total gross income | 7.2 | 7.1 | 6.4 | 5.7 | 5.4 | 3.9 | 2.3 |
| Cash expenses | 7.6 | 5.7 | 4.1 | 3.2 | 2.7 | 2.7 | 2.1 |
| Total expenses | 8.4 | 6.4 | 4.5 | 3.4 | 3.0 | 2.8 | 2.2 |
| Net cash income | 9.2 | 7.8 | 5.5 | 4.0 | 4.0 | 2.7 | 1.7 |
| Net farm income | 6.6 | 6.6 | 5.3 | 5.5 | 5.1 | 3.4 | 1.8 |

Gross cash income is the sum of cash receipts, direct Government payments, and farm-related cash income.

Nonmoney income is the imputed rental value of operator dwellings and the value of home consumption of commodities produced on the farm.

Inventory adjustment excludes receipts from commodities produced in earlier years and includes the value of commodities produced this year but not sold.

Total gross income is the sum of gross cash income, nonmoney income, and the inventory adjustment.

Total expenses include cash expenses, depreciation, and expenses related to the operator's dwellings.

Net cash income is gross cash income less cash expenses.

Net farm income is gross farm income less total expenses.

Proportional Differences Between Forecasts and Final Estimates, 1982-88

| | Outlook Conference | 1st qtr. | 2nd qtr. | 3rd qtr. | 4th qtr. | 5th qtr. | 6th qtr. |
|------------------------|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Percent | | | | | | | |
| Cash receipts | 3.6 | 3.5 | 3.4 | 2.1 | 2.3 | 1.4 | 0.6 |
| Crops | 5.4 | 4.9 | 5.1 | 3.8 | 3.9 | 1.9 | 0.6 |
| Livestock | 4.0 | 3.4 | 2.3 | 1.2 | 1.4 | 3.5 | 0.8 |
| Direct Gov't. payments | 34.6 | 21.6 | 9.8 | 7.7 | 4.1 | 6.3 | 1.7 |
| Gross cash income | 3.8 | 4.0 | 3.5 | 2.6 | 2.5 | 1.6 | 0.8 |
| Nonmoney income | 10.9 | 9.6 | 8.4 | 7.3 | 5.4 | 5.1 | 4.2 |
| Inventory adjustment | 119.7 | 81.1 | 67.5 | 65.7 | 69.8 | 92.7 | 74.1 |
| Total gross income | 4.4 | 4.2 | 3.8 | 3.4 | 3.3 | 2.3 | 1.4 |
| Cash expenses | 7.0 | 5.2 | 3.8 | 3.0 | 2.6 | 2.5 | 1.9 |
| Total expenses | 6.3 | 4.8 | 3.4 | 2.6 | 2.3 | 2.2 | 1.7 |
| Net cash income | 20.2 | 17.0 | 12.2 | 8.8 | 9.1 | 6.2 | 3.8 |
| Net farm income | 19.8 | 20.3 | 19.6 | 20.8 | 18.1 | 11.8 | 5.6 |

Differences Between Outlook Conference Forecast and Final Estimates

| Item | | | Number of years | |
|-------------------------|----------|---------|-----------------|-------------|
| | Smallest | Largest | Below final | Above final |
| \$ billion | | | | |
| Cash receipts | 0.2 | 16.0 | 2 | 5 |
| Crops | 1.0 | 8.8 | 3 | 4 |
| Livestock | 0.6 | 7.6 | 4 | 3 |
| Direct Gov't | 0.1 | 7.8 | 7 | 0 |
| Farm related income | 0.5 | 4.2 | 5 | 2 |
| Gross cash income | 1.0 | 17.0 | 5 | 2 |
| Nonmoney income | 0.5 | 2.6 | 2 | 5 |
| Realized gross inc. | 0.4 | 18.7 | 4 | 3 |
| Value of inv. change | 0.9 | 10.2 | 1 | 6 |
| Total gross income | 1.4 | 13.5 | 4 | 3 |
| Cash expenses | 0.5 | 12.5 | 2 | 5 |
| Total expenses | 0.6 | 13.5 | 1 | 6 |
| Net cash income-nominal | 2.1 | 13.7 | 7 | 0 |
| Net farm income-nominal | 0.1 | 13.8 | 6 | 1 |
| Off-farm income | 0.0 | 4.1 | 4 | 3 |

Forecast Errors Shrink

The forecast errors shrink as the year progresses. The average forecast error for direct Government payments declines by half in the first quarter of the forecast year, and by nearly 80 percent in the second quarter. Likewise, the average forecast error for cash expenses is down by 45 percent two quarters after the Outlook Conference.

A second table ("Proportional Differences...") presents the forecast errors as a percentage of the final estimates. This table gives a better idea of the relative magnitudes of the forecast errors. Again, the pattern of decreasing forecast errors is evident for most items. By the second quarter of the forecast year, the average forecast error is less than 4 percent for gross cash income and both expense forecasts.

The relatively large forecast errors for net cash and net farm income can be attributed to the fact that neither is calculated directly; both are the result of other forecasts. They are constructed by subtracting the expense forecast from the revenue forecast; any errors in the component forecasts are compounded in the net income estimates.

Also, because both net income numbers are less than half the magnitude of either expense or gross income, a given absolute error will be proportionately much larger for the net income forecasts. Even forecasting both gross income and expenses with minimal error can result in very large forecast errors for net income.

Forecasts Show Some Bias

Both the range of forecast errors and the number of Outlook Conference forecasts that were above and below the final estimate appear in a third table ("Differences Between..."). The forecasts for crop receipts and livestock receipts were split evenly, with about half the forecasts under and half over the final estimate.

However, because forecasts of Government payments and farm-related income were consistently below the final estimate, gross cash income was underestimated in 5 of the 7 years. Cash expenses were overestimated in 5 years. But, the 2 years in which cash expenses were underestimated were 2 of the years in which

gross cash income was underestimated. So, forecasts for net cash income were below the final estimate in all 7 years.

The net farm income forecasts were also consistently below the final estimate. Four of the seven forecasts of total gross income were below the final and three were above. But, because the forecasts of total production expenses and inventory adjustment were above the final estimate in 6 of the 7 years, the net farm income forecasts were under the final estimate in all but 1 of the 7 years. [Andy Bernat (202) 786-1807]

Upcoming Releases from the Agricultural Statistics Board

The following list gives the release dates of the major Agricultural Statistics Board reports that will be issued by the time the November *Agricultural Outlook* comes off press.

October

- 2 Egg Products
 - 3 Poultry Slaughter
 - 5 Dairy Products
 - 6 Celery
 - 11 Vegetables
 - 12 Crop Production
 - 13 Turkey Hatchery
 - 16 Milk Production
 - 20 Catfish
 - Cattle on Feed
 - Livestock Slaughter
 - 23 Cold Storage
 - 25 Eggs, Chickens and Turkeys
 - 30 Peanut Stocks and Processing
 - 31 Rice Stocks
- Agricultural Prices



Resources

Some Tillage Methods Still Leave Insufficient Residue

Less than 25 percent of corn, wheat, and soybean acreage surveyed by ERS is tilled to leave at least 30 percent of the soil surface covered with residue after planting.

This statistic, drawn from ERS's 1988 Cropping Practices Survey, may have implications for the amount of land that would currently meet conservation compliance provisions of the 1985 Food Security Act (FSA). Thirty-percent residue is commonly accepted by conservationists as indicating a conservation tillage system, and in most cases should satisfy the compliance called for in the act.

Specifically, the legislation requires that crop acreage designated as highly erodible have a conservation plan approved by 1990 and fully implemented by 1995; failure to meet this requirement may result in loss of program payments. Although a farmer can reduce erosion by several methods—changing crop rotation, installing permanent retaining structures, or switching tillage systems—the last is often the cheapest alternative.

Depending on the crop, 15 to 30 percent of the 1988 corn, wheat, and soybean acreage was under conventional tillage with a moldboard plow. The plow leaves an average of only 2 percent of the previous crop residue, since it turns under the first few inches of topsoil.

At the other extreme, a no-till system was used on 7 percent of the corn acreage and about 1 percent of the wheat acreage. No-till left an average of 60 to 70 percent of the soil surface covered with residue.

Most of the acreage surveyed was cropped with conventional tillage without the moldboard plow. This system leaves less than 30 percent residue, although the implements used do not invert the soil. Conventional tillage systems without a moldboard plow leave less than half as much residue after planting as mulch-till, a conservation tillage system.

Tillage and Residue Vary Widely on Corn Acreage

For corn, tillage practices varied widely among the 10 major producing States, reflecting diverse production techniques and environments. A moldboard plow was used on 20 percent of 1988 corn acres. Its use was highest (57 percent) in Wisconsin, where corn/alfalfa rotations support dairy farming.

In Nebraska, the moldboard plow was used on only 5 percent of the corn acres. Nebraska does not have a preponderance of wet/heavy soils which require fall plowing. However, it does have more serious wind erosion problems than many other States.

Among the surveyed States, no-till systems were used on only 7 percent of the corn acres. Ohio had the highest percentage, 13. Ohio has traditionally had the highest amount of no-till acreage because of the emphasis placed on conservation tillage by its agricultural agencies.

The amount of no-till residue remaining in Michigan and Minnesota depended on the previous crop. In Michigan, where 55 percent of the corn was produced after corn in 1987, and 15 percent of the corn followed soybeans, no-till corn had 72 percent average residue remaining after planting.

In Minnesota, where 31 percent of corn was grown after corn and 46 percent after soybeans, the no-till residue was only 42 percent, since soybeans leave a more sparse and fragile residue than corn. The average no-till residue level

was higher in Nebraska, because of the extensive continuous corn production.

Heavy Moldboard Plow Use in Oregon and Oklahoma Winter Wheat

Oregon and Oklahoma report the heaviest reliance on moldboard plows in winter wheat production. According to USDA's Extension Service personnel, some producers in Oregon may believe that the risk of disease intensifies when large amounts of wheat residue are left on the soil surface. Agricultural agencies in Oregon are researching this perception.

Idaho and Minnesota report greater-than-average use of the plow in producing spring wheat. Idaho uses no-till on 10 percent of its winter wheat acreage, and reports no use on spring wheat acreage. Idaho agricultural agencies have emphasized adoption of no-till in winter wheat areas, which have higher erosion potential.

Soil Residue Calculations and Tillage System Definitions

Tillage designations for 1988 were derived from estimates of residue remaining after planting and from information on tillage implements used. The estimate of the percent of soil surface covered with residue was imputed from the crop grown on the land in 1987 and the residue incorporation rates of tillage implements used in 1988. Previous-year crop and implement use data were from ERS's 1988 Cropping Practices Survey.

Tillage systems are defined as follows:

Conventional tillage systems—leave less than 30 percent of the soil surface covered with residue after planting. Two subcategories:

1. Conventional tillage with moldboard plow—includes the use of a moldboard

plow and soil inversion.

2. Conventional tillage without moldboard plow—leaves less than 30 percent residue but does not use a moldboard plow. Usually involves several trips over the field with disks, cultivators, or chisel plows.

Conservation tillage systems—leave 30 percent or more of the soil surface covered with residue after planting. Two subcategories:

1. Mulch-tillage—leaves 30 percent or more residue after planting but does involve some tilling, usually a single trip over the field with a disk, cultivator, or chisel plow.

2. No-till—no residue-incorporating tillage operations performed prior to planting. Ridge-till was included in this category.

Tillage Practices Used in Corn Production, 1988

| Category | Ill. | Ind. | Iowa | Mich. | Minn. | Mo. | Neb. 1/ | Neb. 2/ | Ohio | S. Dak. | Wis. | Total |
|---------------------------------|-------|-------|--------|-------|-------|-------|---------|---------|-------|---------|-------|--------|
| Planted acres (1,000) | 9,900 | 5,200 | 11,300 | 2,100 | 5,700 | 2,200 | 3,300 | 4,600 | 3,300 | 3,150 | 3,450 | 53,200 |
| Percent of acres 3/ | | | | | | | | | | | | |
| Tillage: | | | | | | | | | | | | |
| Conv/w mbd plow | 10 | 25 | 14 | 35 | 31 | 17 | 1d | 5 | 38 | 25 | 57 | 20 |
| Conv/wo mbd plow | 72 | 57 | 66 | 42 | 44 | 68 | 61 | 63 | 40 | 54 | 35 | 60 |
| Mulch-till | 11 | 8 | 15 | 11 | 20 | 10 | 24 | 21 | 9 | 18 | 7 | 14 |
| No-till | 7 | 10 | 5 | 11 | 5 | 5 | 10 | 12 | 13 | 1d | 1d | 7 |
| Percent of soil surface covered | | | | | | | | | | | | |
| Residue: | | | | | | | | | | | | |
| Conv/w mbd plow | 2 | 2 | 2 | 2 | 3 | 2 | 1d | 2 | 2 | 2 | 2 | 2 |
| Conv/wo mbd plow | 15 | 15 | 17 | 17 | 14 | 14 | 18 | 20 | 15 | 16 | 20 | 16 |
| Mulch-till | 37 | 35 | 38 | 41 | 38 | 41 | 41 | 39 | 37 | 37 | 35 | 38 |
| No-till | 57 | 64 | 57 | 72 | 42 | 45 | 65 | 69 | 68 | 1d | 1d | 60 |
| Average | 19 | 18 | 20 | 21 | 17 | 17 | 27 | 29 | 19 | 17 | 11 | 19 |

1d = Insufficient data.

1/ Nonirrigated. 2/ Irrigated. 3/ May not add to 100 because of rounding.

Tillage Practices Used in Winter Wheat Production, 1988

| Category | Ariz. | Calif. | Colo. | Idaho | Ill. | Ind. | Kan. | Mo. | Mont. | Neb. | Ohio | Okla. | Ore. | Tex. | Wash. | Total |
|---------------------------------|-------|--------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|------|-------|-------|--------|
| Harvested acres (1000) | 1,050 | 440 | 2,350 | 790 | 1,220 | 700 | 9,400 | 1,550 | 2,100 | 2,000 | 920 | 4,800 | 660 | 3,100 | 1,750 | 27,390 |
| Percent of acres* | | | | | | | | | | | | | | | | |
| Tillage: | | | | | | | | | | | | | | | | |
| Conv/w mbd plow | nr | 6 | 6 | 16 | 3 | 13 | 17 | 1d | 1d | 19 | 3 | 29 | 40 | nr | 5 | 15 |
| Conv/wo mbd plow | 79 | 86 | 71 | 66 | 93 | 78 | 62 | 68 | 74 | 68 | 72 | 64 | 53 | 77 | 81 | 67 |
| Mulch-till | 16 | 8 | 24 | 7 | 5 | 9 | 20 | 24 | 17 | 12 | 18 | 7 | 6 | 22 | 12 | 16 |
| No-till | 4 | nr | nr | 10 | nr | nr | 1d | 5 | 7 | nr | 7 | nr | 1d | 1d | 2 | 1 |
| Percent of soil surface covered | | | | | | | | | | | | | | | | |
| Residue: | | | | | | | | | | | | | | | | |
| Conv/w mbd plow | nr | 1 | 2 | 2 | 2 | 3 | 2 | 1d | 1d | 2 | 1 | 2 | 2 | nr | 2 | 2 |
| Conv/wo mbd plow | 13 | 7 | 17 | 11 | 17 | 15 | 14 | 18 | 15 | 15 | 16 | 11 | 12 | 14 | 15 | 14 |
| Mulch-till | 43 | 43 | 41 | 45 | 41 | 45 | 36 | 41 | 36 | 36 | 39 | 38 | 35 | 39 | 40 | 38 |
| No-till | 68 | nr | nr | 38 | nr | nr | 1d | 68 | 80 | nr | 55 | nr | 1d | 1d | 35 | 61 |
| Average | 20 | 9 | 22 | 15 | 17 | 17 | 17 | 25 | 23 | 15 | 23 | 11 | 10 | 20 | 18 | 17 |

1d = Insufficient data. nr = none reported.

*May not add to 100 because of rounding.

Soybean Tillage Shows North-South Differences

Soybean tillage systems differ between northern and southern producers. In the northern area, conventional tillage with a moldboard plow was used on 28 percent of the acres, compared with only 3 percent of the southern area. In contrast, conventional tillage without the moldboard plow was used on 85 percent of southern acreage, compared with 55 percent of northern acreage.

Mulch tillage was more common in the northern soybean area than in the southern (14 versus 5 percent), while no-till was more common in the southern area (7 versus 3 percent).

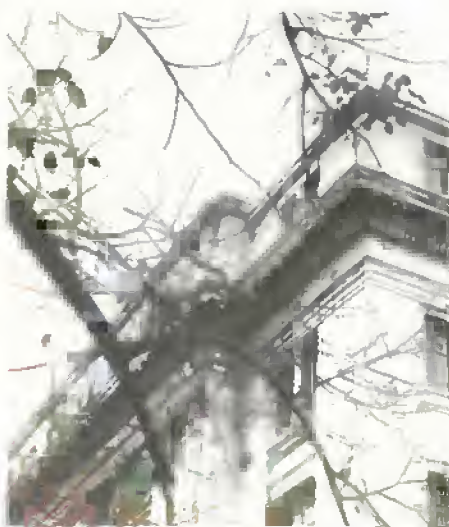
Crop rotation practices may explain these differences. In the southern soybean area, 50-90 percent of the previous crop was either soybeans or was fallow (leaving fragile and limited residues). In the northern area, over 60 percent of the previous crop residue was corn, which leaves a sturdier and heavier residue.

Conservation Practices Must Be in Place by 1995

The adoption of conservation tillage may become increasingly widespread, considering the conservation compliance provisions of the 1985 FSA, expectations about the environmental aspects of a new farm bill, and the continuous search to reduce costs of production. Furthermore, conservation tillage practices applied to land that is not highly erosive, or adopted by nonparticipants in government programs, could further protect soils.

Conservation tillage practices also improve surface water quality; Federal and State legislation, such as the Water Quality Act of 1987, encourages their adoption. Thus, both agricultural and environmental policy may influence the adoption of conservation tillage.

Expectations are that the 1985 FSA requirements will produce a significant increase in mulch-till and no-till farming by 1995. The adoption of conservation tillage systems will need to proceed more rapidly for certain regions and crops, such as soybeans in the South, if the 30-percent residue cover goal is to be reached. [Len Bull and Stan Daberkow (202) 786-1464]



Agricultural Policy

Issues for the 1990 Farm Bill

The Administration, farmers, Congress, and many agricultural trade groups appear to approve of the stronger market orientation of the Food Security Act of 1985. Therefore, it is likely that the 1990 farm bill will be even more market oriented.

However, a number of issues will be debated before a new omnibus act is approved, including farm program costs, price and income supports, food safety, the environment, and rural development. These issues will need to be integrated with traditional objectives: protecting farm income, correcting supply-demand imbalances, managing exports, and ensuring an adequate and stable food supply.

The Budget and GATT Dominate

The Gramm-Rudman-Hollings balanced budget law requires that the Federal deficit be reduced to \$64 billion in fiscal 1991 and to zero by 1993. This schedule will necessitate some tough choices for policymakers.

Spending on farm programs likely will decline, and policies and programs will be scrutinized as to their direct effect on the budget and what they spell in potential budget exposure. The debate will focus on how spending will be allocated across program areas.

Agricultural policy negotiations and debates are occurring on two fronts, domestic and international. In the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), the U.S. and other GATT participants are negotiating to progressively reduce agricultural supports that distort trade. At the same time, some proposed farm policies for the 1990 farm bill may be trade distorting. The issue of consistency between the 1990 farm bill and any agreements made at the GATT will continue to be debated.

Supports: A Gordian Knot?

Price and income supports involve a number of issues that are extremely complex, highly integrated, and that may even conflict. These issues include production controls, planting flexibility, stocks policy, the link between production levels and program benefits, the levels for target prices and loan rates, and trade.

A component of the current policy is to idle land under acreage reduction programs (ARP's) in order to correct supply-demand imbalances. ARP's enable the Government to strongly influence the production of specific commodities. Restricting production increases market prices above what they otherwise might be. And the nonrecourse loan program (i.e., minimum prices) cuts downside price risk, potentially leading to more intensive production. This situation creates some unwanted effects:

- program participants may intensify production on permitted acres, especially if the market price is below the loan rate;
- nonparticipants may increase production when the market price is pulled up by the loan rate;
- the cost of U.S. farm exports rises, making farm commodities less competitive; and
- competitors can expand their production and capture markets.

Government commodity programs, as currently structured, make it more difficult for farmers to plant nonprogram

crops (including soybeans) on base acreages, even when market prices favor non-program crops.

Exceptions allowing greater planting flexibility have been permitted, including provisions in the 1988 and 1989 disaster assistance acts, as well as the changes to the 1990 wheat program announced last month (see the Field Crop Overview).

The levels set for target prices and loan rates may be realigned in the new farm bill. The levels directly influence farmers' assessment of the relative attractiveness of one crop over another, and the decision on whether to participate in commodity programs. Farmers' participation rates determine the degree of Government budget exposure, the programs' relative success in controlling production, and the likely accumulation of Government stocks.

Another issue that will receive attention is targeting of program benefits. Are program benefits received by those who need the support? Some critics of current programs worry that smaller family farm operators do not receive adequate benefits, while big farms may enjoy unnecessary support.

Food Reserves: Who Will Pay?

Who bears the cost of maintaining food reserves is a concern. The Federal Government, through the nonrecourse loan programs, has accumulated large commodity stocks in the past. While large Government stocks support market prices, they also increase the cost of maintaining the U.S. position in world markets when supplies are plentiful.

And reserves augment world supplies when production is cut short, thus dampening price increases. There is a cost in both situations: loss of markets when world supplies are plentiful, or loss of farm income when world supplies would otherwise push up prices.

At the same time, these reserves enable the Government to operate food distribution/donation/subsidy programs such as cheese giveaways, national school lunch and breakfast programs, and the Temporary Emergency Food Assistance Program.

The Export Enhancement Program and the Targeted Export Assistance Program are supported by Government stock holdings, as commodities are used to subsidize exports or develop markets. The P.L. 480 program enables the Government to provide food aid to needy countries by drawing on Commodity Credit Corporation holdings.

With droughts in the 1988/89 and 1989/90 seasons, and through the use of commodity certificates, CCC holdings have declined dramatically. As of September 1, the CCC held 168 million bushels of wheat and 363 million bushels of corn. However, at the same time that market supplies were tightening, the release level for corn in the farmer-owned reserve was reached only briefly, and minimum cash resale levels for corn and wheat in CCC inventories were never reached.

At issue is how much responsibility for maintaining reserves should go to the Government versus how much to the private sector. Compounding the issue is another question: how extensively should reserve policy be integrated with other programs?

Food Safety and Environment Are Emotional Issues

The controversy over use of Alar on apples, questions about bovine somatotropin, and the EC ban on meat imports treated with hormones have heightened public awareness about food safety. New technologies and reactions by consumers are the major driving forces behind the rapidly changing food safety arena.

Genetic research and bioengineering advances have led to new ways of producing traditional products, giving rise to questions: Is bST-produced milk still milk? Is a tomato genetically altered to have a longer shelf life still a tomato?

Similarly, scientific advances now allow researchers to measure chemical residues and bacteria that went undetected 5 or 10 years ago. Now that they can be accurately measured in minute amounts, what are acceptable levels of chemical residues and bacteria in food? Are existing standards outmoded?

As a result, consumers, increasingly confronted with new food-related information, are increasingly concerned with the types and amounts of food chemicals.

Congress is also concerned. Sen. Edward Kennedy (D-MA), Rep. Henry Waxman (D-CA), and others have introduced legislation that would regulate pesticide residues in food. Legislation is in the works that would establish inspection of seafood and tighten processing standards for poultry. The 1990 farm bill may be an avenue for legislative action on food safety.

Are farmers stewards of the land or are their practices degrading the environment? The Conservation Reserve Program (CRP) currently has over 30 million acres of erodible land enrolled through the eighth signup, and has successfully reduced soil loss. However, expansion to 40-45 million acres, as directed by the Food Security Act of 1985, will be costly and will require idling land at a time of tightening supplies. Under the ninth signup, which ended August 4, USDA offered to place an additional 4.2 million acres into the Reserve.

The House has proposed a moratorium on future signups as a means of saving money. The budget, the environment, and food cost trade-offs will face decisionmakers as work on the new farm bill progresses.

Concerns have been growing about agricultural chemicals in groundwater. Fertilizer and pesticide runoff have been found in some water supplies: groundwater testing has revealed at least 17 pesticides and nitrates from fertilizer in the supplies for 23 States. And 35 States have enacted some form of groundwater protection.

There is a movement to reduce or even eliminate chemical use in agriculture. The Safe Drinking Water Act of 1985 calls on States to develop groundwater protection programs with Federal assistance. Several States also are defining what an "organically grown" commodity is.

There is a call for sustainable agriculture, or low input sustainable agriculture. The National Academy of Sciences has come

out with a study of alternative agriculture that is fueling the debate. One of the study's conclusions is that "[F]ederal programs often tolerate and sometimes encourage unrealistically high yield goals, inefficient fertilizer and pesticide use, and unsustainable use of land and water."

A provision of S.970, a bill introduced by Sen. Wyche Fowler, Jr. (D-GA), would establish a low input sustainable production system program. The question is how producers can remain economically viable without harming the environment.

Rural Development Is a Hot Issue

The fact that the rural sector and the farm sector are not synonymous became apparent in the 1980's. Federal programs that benefit farmers do not necessarily aid the rural sector as well. There are approximately 3,100 counties in the U.S.; of these, 15 to 20 percent are defined as agriculturally dependent; that is, having at least 20 percent of income derived from farming.

The Senate has already passed a comprehensive rural development bill which would provide broad-based funding to the rural sector. The House is considering the issue. Development policies that would promote growth in rural America, both in farming and outside it, likely will be part of the 1990 farm bill debate.

Crop insurance versus disaster assistance will be an issue. Disaster relief undermines the need for crop insurance, but for the past 2 years, Congress has authorized disaster relief (see the special article in this issue).

Credit and debt restructuring also remain concerns, even though the Agricultural Credit Act of 1987 substantially revamped the farm credit delivery system. About 40 percent of the farm loans held by USDA's Farmers Home Administration are delinquent; the agency is continuing to work with its stressed borrowers to minimize foreclosures. [Harry Baumes (202) 786-1689]





Special Articles

Liberalizing World Trade In Coarse Grains

This is the third in a series summarizing research on what could happen as negotiations under the GATT (General Agreement on Tariffs and Trade) move toward free trade in agriculture. Negotiators at the April review of the Uruguay Round agreed to "substantial progressive reductions in agricultural support and protection over an agreed period of time."

While there are adjustment costs involved in moving away from protectionism, both theory and research results suggest that the benefits of free trade outweigh the costs. But because there never has been free trade in agriculture, the findings in these articles are, of necessity, speculative. The results here represent a consensus of research conducted by the Economic Research Service, universities, and international organizations. A longer, in-depth research report lies behind each article, and will be available from the authors.—Ed.

Research suggests that phasing down worldwide government support and protection of agriculture would push up the volume of world coarse grain trade and increase coarse grain prices. World coarse grain production and consumption would rise slightly. Coarse grains include corn, barley, sorghum, oats, and rye.

U.S. coarse grain output could expand, depending on the trade-off between set-aside acreage returning to production, less intensive use of other inputs, and the relative attractive-

ness of other crops. U.S. exports likely would increase in response to rising world demand. In turn, market receipts for U.S. producers would go up as world prices rose, even though total receipts (including Government support) would decline, unless decoupled income-support payments were made.

Coarse Grain Stocks Ballooned in Early 1980's

Agriculture and trade policies of the major coarse grain trading countries, plus global recession and the international debt crisis, contributed to a 65-percent increase in world coarse grain stocks during 1980-85. Production rose by 15 percent to 843 million metric tons, but consumption expanded by only 4 percent to 779 million tons. World prices slipped about 30 percent. Trade in coarse grains dropped 23 percent to 83 million tons.

GATT participants, including many major players in the world coarse grain market, have recognized the need to reform their agricultural and trade policies. The April agreement reflects this consensus, and expands GATT's role in reforming domestic agricultural programs (see the May *Agricultural Outlook*). A recent study estimated that world savings for consumers and taxpayers from agricultural trade reform could be substantial.

Policies Distort Trade

The EC and the U.S. both support domestic coarse grain producer prices to varying degrees, in part to maintain farm incomes. Some exporters, such as Canada, reduce production costs by subsidizing inputs. These actions increase the world's supply of coarse grains. If domestic consumer prices are not kept lower than the supported producer prices by governments, consumption falls and exportable supplies pile up, leading to lower world prices.

Producer Subsidy Equivalents (PSE's) for Coarse Grains, Average 1982-86*

| Country | Corn | Sorghum | Barley | Oats | Rye |
|------------------|------|---------|--------|------|------|
| Percent | | | | | |
| Exporters | | | | | |
| United States | 27.1 | 31.4 | 28.8 | 7.6 | -- |
| EC-10 | 24.8 | -- | 14.2 | -- | -- |
| Argentina | .3 | -27.4 | -- | -- | -- |
| Canada | 10.0 | -- | 32.1 | 9.7 | 27.2 |
| Australia | -- | -- | 2.9 | -- | -- |
| South Africa | 50.3 | -- | -- | -- | -- |
| Importers | | | | | |
| Japan | -- | -- | 96.9 | -- | -- |
| South Korea | 59.4 | -- | 65.6 | -- | -- |
| Taiwan | 70.1 | 74.3 | -- | -- | -- |
| Nigeria | 2.8 | -- | -- | -- | -- |
| Brazil | 4.0 | -- | -- | -- | -- |
| Mexico | 53.1 | 36.5 | -- | -- | -- |

*The ratio of total government support to total farm revenue (including government support), as a percentage. Government support includes the benefits of import protection, direct payments, extension, research, plus input and marketing subsidies. A negative PSE means that the net effect of government policies is to tax producers.

Source: ERS Staff Report AGES880127, April 1988.

In many nations, trade policies complement domestic agricultural programs by helping to boost farm income or cut surplus stocks. When governments keep producer prices above world prices, exporters often rely on subsidies to move grain into foreign markets. At the same time, many governments impose import barriers to protect domestic growers, further lowering world prices.

Protectionist Tools Vary

The U.S., the largest producer and exporter in the world coarse grain market, has historically maintained substantial coarse grain stocks as a consequence of its price-support programs. U.S. support policies have generally put a floor under world coarse grain prices. But, since the implementation of the 1985 Food Security Act, most loan rates have been below market-clearing levels.

The EC engages in intervention purchasing at above-market prices, which increases production and reduces domestic consumption. Consequently, the EC uses export subsidies and has become a substantial exporter of barley, while importing less corn.

To deal with overproduction, exporting countries often resort to subsidizing domestic and foreign consumers. In the U.S., the Export Enhancement Program for barley and sorghum acts to subsidize the foreign consumer. These exporter policies tend to lower world coarse grain prices.

To protect domestic producers, importing countries often impose tariffs on imported coarse grains. These tariffs, together with the exporter policies, lower world prices.

Producer subsidy equivalents (PSE's) are a means of comparing coarse grain subsidies and trade barriers across nations. PSE's are defined as the ratio of total government support to total farm revenue (including government support). Total government support includes the benefits of import protection, direct payments, extension and research, plus input and marketing subsidies. The larger a nation's PSE, the more its producers could lose if the world moved to free trade.

According to the PSE's for 1982-86, producers in Japan, South Africa, Canada, the EC, and the U.S. stand to experience the greatest declines in support if trade reform occurs. But some developing countries with high PSE's likely would receive special treatment under GATT terms, in order to continue developing their agricultural sectors.

Efficient producers may be able to recoup some of the lost support as world prices rise and trade expands.

Higher Livestock Prices Would Pull Up Corn Demand

Several recent studies suggest that livestock prices would rise relative to coarse grain prices because of trade liberalization. If so, coarse grain demand in several countries (such as the U.S., Canada, Australia, and the EC) would be pulled up.

Subsidies for promoting wheat exports by the U.S. and EC have dropped world wheat prices relative to coarse grain prices. The removal of export subsidies in liberalizing countries could reduce coarse grain prices relative to wheat prices, eroding the use of wheat as livestock feed. The removal of variable levies in the EC would lower the incentive to use substitutes for coarse grains. Bottom line: multi-national trade liberalization would boost the worldwide demand for coarse grains.

Other cross-commodity relationships that would affect world coarse grain markets reflect the relative scarcity of cropland. In the U.S. and Argentina, the major alternatives to producing coarse grains are soybeans, wheat, and livestock. In Australia and Canada, wheat and livestock are the major alternatives.

Prices Would Rise

Coarse grain prices likely would increase in the long run with the removal of program incentives to overproduce, increased livestock demand for coarse grains, and the elimination of export subsidies. Several recent studies have found that coarse grain prices would rise between 1 and 11 percent in the long run under free trade. This rise should not be confused with per-bushel revenue received by farmers, which likely would decline in most developed countries as subsidies for coarse grains were eliminated.

Coarse grain prices' relationship to other commodity prices would change as well. Recent studies suggest that the prices of coarse grains likely would decrease relative to wheat and livestock, but rise relative to soybeans.

Effects on Price Stability Unclear

Some studies suggest that the net effect of trade liberalization would be more stable coarse grain prices, while other studies suggest less stable prices. For individual countries, price stability will vary with the programs now in place.

On the one hand, world market prices for coarse grains could become more stable, because more market participants would share in adjusting to any supply or demand shocks. After liberalization, producer and consumer prices would converge with the world price as differences caused by subsidies were removed. Differing marketing and transportation margins would continue to introduce some variation, though.

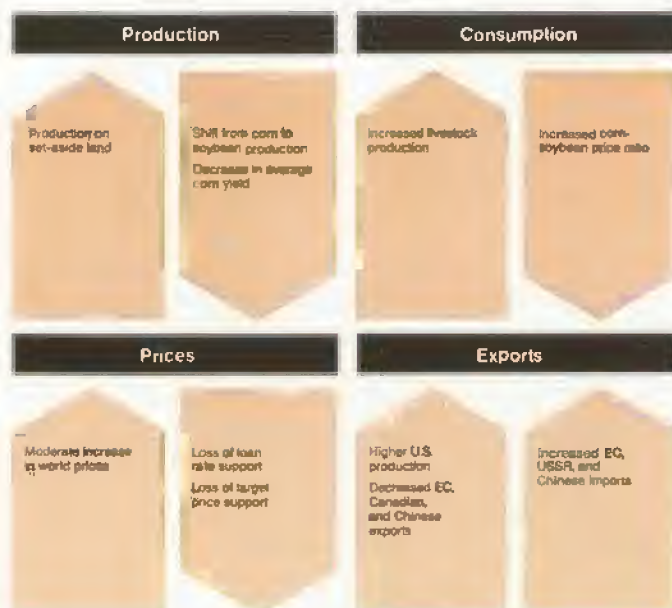
On the other hand, the domestic prices faced by consumers and producers in regions where prices are now stabilized by governments, such as the U.S., the EC, and Japan, would fluctuate more than now, as the world market opened up. Some researchers believe that these individual effects would cause world prices to become more unstable, since the U.S., a dominant participant in coarse grain trade, would face more variable prices in absence of a large stockpiling program.



World Trade Liberalization Would Increase Production, Consumption, Prices, and Trade



In the U.S., Trade Liberalization Would Mean More Production And Higher Prices



Who's Who in the World Coarse Grain Market

Nearly three-quarters of the world's coarse grain is grown in the U.S., the USSR, the EC, China, and Eastern Europe. The U.S. alone accounted for 30 percent of the world's production in 1985-87. Canada, Argentina, Australia, South Africa, Thailand, Brazil, India, Mexico, and Nigeria each averaged only 1 to 3 percent of total world production.

World coarse grain consumption is concentrated in the U.S., the USSR, China, the EC, and Eastern Europe. These five typically account for about 70 percent of the world's coarse grain consumption, and the U.S. share is about 22 percent.

India and Brazil each take 2-3 percent of total world consumption, and depend mainly on their own output. Saudi Arabia, Algeria, South Korea, Egypt, Taiwan, Japan, Mexico, and Venezuela each account for less than 3 percent of total consumption, but collectively are significant importers.

The U.S., EC, Argentina, Canada, China, Australia, Thailand, and South Africa account for more than 90 percent of the world's coarse grain exports. During 1985-87, the average world market share for the U.S. was 55 percent. Major trade flows have shifted from Western Europe to the Middle East and Asia in the last decade. Since 1985, the EC and China have shifted their status from net importers to net exporters.

Major coarse grain importers include Japan, the EC, the USSR, Saudi Arabia, South Korea, Taiwan, Eastern Europe, and Mexico. Together they account for nearly three-fourths of the world's coarse grain imports.

Historically, the U.S. is the world's largest coarse grain stockholder. It held an average of slightly more than 60 percent of the world's stocks in 1985-87. The U.S. and the EC are the only large producers whose domestic policies include grain storage to absorb excess production. Other major stockholders include China, the USSR, Eastern Europe, Canada, and Japan.

U.S. Would Be Major Source Of Production Change

Coarse grain production in the U.S. likely would increase with free trade, as much of the land idled under the Acreage Reduction and Paid Land Diversion programs returned to production. This would more than offset the acreage decrease due to farmers' abandoning coarse grain production because of lost program payments. (The analyses assume that GATT reform would not affect acreage in the Conservation Reserve Program.)

Total returns received by U.S. coarse grain farmers would fall relative to soybeans as government payments were lost, leading some producers to switch acreage to soybeans. On balance, though, most studies suggest that U.S. coarse grain production would still increase.

U.S. livestock producers likely would respond to the rising world demand for meat by expanding production. World meat consumption would go up as the EC and Japan removed trade barriers, which would lower their domestic consumer meat prices. More U.S. livestock production would boost the demand for U.S. coarse grains.

U.S. coarse grain exports would probably expand in response to greater world demand combined with smaller EC and Canadian exports.

World Output, Consumption Would Rise Slightly

Because of the movement away from protectionism, world coarse grain production would shift away from inefficient producers to more efficient ones, both within and across countries. The U.S., Argentina, and Thailand, all efficient producers, probably would increase output. However, production likely would decline in the EC, Japan, and Taiwan.

Long-run coarse grain consumption probably would gain because of the rise in world livestock prices. This increase assumes a growing population and rising incomes, leading to larger per capita consumption of meat, particularly in developing countries. The greatest potential for growth in world coarse grain consumption is in the Middle East and parts of Asia. African, Latin American, and East European countries have the potential to import more coarse grains, provided their debt problems become more manageable.

EC Probably Would Feel Greatest Impact

Because of lower domestic coarse grain prices, EC farmers probably would reduce production. But the size of the adjustment would depend on how relative prices changed and how much land went out of production. Livestock producers would use more coarse grains as feed, so the EC could again become a net coarse grain importer.

Trade reform would eliminate transportation subsidies for Canadian coarse grain producers, increasing export marketing costs. The likely result would be more domestic use for livestock feeding and less exports.

Among other coarse grain exporters, Australia probably would continue to export barley, but little expansion seems likely. Several studies indicate that Australia likely would produce more wool, wheat, and livestock, rather than boosting coarse grains substantially.

Thailand does not intervene much in coarse grain markets, and likely would expand production modestly in response to the slight increase in world coarse grain prices. However, its expanding poultry sector would probably use most of the additional grain.

Argentina could respond to trade reform by expanding coarse grain production and exports. The extent of the

response depends on whether the country participates in policy reform or not, since its output increase would be greater if export taxes were eliminated.

Argentina has extensive natural resources and is a low-cost producer of corn and sorghum. But coarse grains must compete with livestock and soybeans for these resources. Moreover, an inadequate transportation system and an unstable economy could limit production growth.

China, the USSR, and Eastern Europe likely will not participate in this round of GATT trade reform. Should China's livestock production expand as planned, domestic demand for coarse grain would increase. China could continue to export coarse grain from its northern provinces to the USSR and Japan, but also increase imports into south China, becoming a net importer.

The USSR and Eastern Europe, both large importers, probably will continue expanding their livestock production. Because world wheat prices would probably rise relative to corn after trade liberalization, the USSR and Eastern Europe would import more coarse grains.

Japan imports nearly all its coarse grains. Trade reform would lead to increased meat imports and decreased domestic coarse grain production. Domestic beef, dairy, and pork production would fall, which would reduce coarse grain consumption by more than production. So Japan's imports would fall.

World Trade To Rise

Trade liberalization likely would mean that world coarse grain trade would go up faster than would otherwise be the case. For example, the EC probably would reduce production, but expanded livestock consumption of coarse grain would probably mean increased imports, largely from the U.S. The increase in trade due to the EC would be offset somewhat by lower Canadian exports and fewer Japanese imports.

These results reflect the likely effects of full multilateral trade reform in the industrial nations. If these nations go only part of the way, the direction of changes in trade, production, and prices would be the same, but the changes would be smaller. Because coarse grain consumption depends critically on livestock production decisions, the results outlined here, under full liberalization, also reflect likely changes in world livestock production. But a different pattern would emerge if, for example, coarse grains markets opened up but livestock markets remained protected.

Moreover, U.S. trade policy officials have stressed that eliminating domestic U.S. support and trade programs must be matched by similar actions in other countries. [Linwood Hoffman, Bengt Hyberg, and Stephanie Mercier (202) 786-1840]



Weighing Crop Insurance Alternatives

Problems with the current federal crop insurance program have caused policymakers to suggest several alternatives. The present program has been characterized by low farmer participation, high Government costs, and frequent use of ad hoc disaster assistance acts that undercut the need for crop insurance. (See the September *Agricultural Outlook*, page 2, for more on these problems.)

New options, which could be included in the 1990 farm bill, include the following:

- compulsory purchase of crop insurance for commodity program participants,
- free crop insurance for commodity program participants,
- replacement of crop insurance with a permanent disaster payment program, or
- replacement of deficiency payment programs with a target revenue program.

The option of improving the current voluntary, subsidized crop insurance program is undergoing further study and is not considered here.

The potential budget impacts of these four alternatives are critically important to policymakers. Total indemnity or disaster payments would depend on the extent of insurance coverage, the extent of the disaster, and whether program benefits were restricted to participants in Government commodity programs. Other possible costs are also significant. Some of the program options could have sizable effects on

commodity program participation and crop production, and hence on Commodity Credit Corporation outlays for price support loans and deficiency payments.

To examine the potential market and budget effects of the program options, a model was used to capture producer, consumer, and Government behavior. The simulations that were run for the 1989 crop year were based on a large number of possible yield outcomes for corn, wheat, soybeans, and cotton.

Prices, demand, production, planted and harvested acreage, ending stocks, and commodity program participation were calculated for each of the simulated national yield outcomes. In addition, the model was used to estimate Federal budget costs (loan and storage outlays, deficiency payments, disaster payments, and net indemnity payments).

How Program Options Vary

Four new program options, plus an option representing the current program, were simulated:

Compulsory crop insurance.—Under this option, commodity program participants would be required to purchase crop insurance at a 65-percent yield guarantee at the lowest of three possible price election levels. (Higher yield guarantees and price election levels could be chosen voluntarily.) The Government would subsidize 30 percent of the premium. There would be no ad hoc disaster assistance. All other features of the current program would remain intact.

Free crop insurance.—Commodity program participants would receive free insurance coverage at the lowest price election level for 65-percent yield coverage. There would be no ad hoc disaster assistance. All other features would be the same as under the current program.

Disaster assistance program.—This program would replace Federal crop insurance. Payments would be available to any producer who suffered crop losses in excess of 35 percent. Payment rates would be based on 65 percent of target prices for corn, wheat, and upland cotton producers, and on \$5.50 per bushel for soybean producers.

Target revenue program.—This program would replace both the crop insurance and deficiency payments programs, and would be available for corn, wheat, and upland cotton producers. The current loan program would remain in place, as would acreage reduction requirements. Program participants would be paid the difference, if positive, between the target revenue and the actual revenue they receive from marketing the crop or placing it under loan. Target revenues would be calculated by multiplying the target price by the program yield. There would be no ad hoc disaster assistance.

Ad hoc disaster assistance (this option represents the current program).—Under this option, loan rates, target prices, and acreage reduction program levels are set at 1989 levels. Ad hoc disaster assistance is assumed to be paid if U.S. yields

How Insurance Options Could Affect Average Government Costs for Four Crops*

| Item | Ad hoc disaster assistance | Disaster assistance option | Crop insurance options | | Target revenue option |
|---|-------------------------------|-------------------------------|------------------------|---------|--------------------------|
| | | | Compulsory | Free | |
| \$ million | | | | | |
| 1989 crop year estimated | | | | | |
| Government outlays: | | | | | |
| Loan and storage | 1,563.2 | 1,555.6 | 1,580.8 | 1,612.6 | 1,380.0 |
| Deficiency payments | 6,817.5 | 6,750.0 | 6,956.2 | 7,152.3 | 3,809.2 |
| Ad hoc disaster | | | | | |
| payments | 577.9 | 1,186.8 | --- | --- | --- |
| Indemnity payments | 277.7 | --- | 596.3 | 617.5 | --- |
| Producer premium | -194.4 | --- | -417.4 | 0 | --- |
| Administrative costs | 197.9 | 207.7 | 223.7 | 231.5 | --- |
| Total | 9,239.9 | 9,700.1 | 8,939.6 | 9,613.9 | 5,189.2 |
| Percent | | | | | |
| Share of current program | 100.0 | 105.0 | 96.8 | 104.0 | 56.2 |
| Share of disaster assistance program option | 95.3 | 100.0 | 92.2 | 99.1 | 53.5 |

--- = not applicable.

*Wheat, corn, soybeans, and upland cotton.

Source: ERS/USDA, Staff Report No. AGES84-29, September 1989.

are simulated to be less than 90 percent of expected trend. Individual disaster payments are made on crop losses in excess of 35 percent of expected yield, on a payment rate of 65 percent of target prices for wheat, upland cotton, and corn, and \$5.50 per bushel for soybeans.

Target Revenue Alternative Would Have Greatest Market Effects

The simulation results indicate that, on average, any of the four new program options would have fairly modest effects on prices, per acre revenues, commodity program participation, and harvested acreage.

The largest market effects likely would occur under the target revenue program. Under the current crop programs, deficiency payments are calculated by multiplying the producer's program yield by the difference, if positive, between the target price and the greater of the national average price or the national loan rate. Program yields used to calculate deficiency payments have been frozen at their 1985 levels, although actual yields have been trending upward.

While the current program protects producers against low prices, it offers little protection against disaster-reduced yields (the case most of the time). When drought occurs, increasing prices reduce the deficiency payment.

Under a target revenue program, producers would fare better than under the current program when actual yields fell below program yields, but worse when actual yields were above program yields. This would stabilize producer revenues around the target level.

Per acre, revenues for target revenue program participants were estimated to be substantially less than under the current program, mainly because of the discrepancy between fixed program yields and actual yields.

Participation Would Rise Most With Free Insurance

The compulsory crop insurance and disaster assistance options produced participation rates and market effects similar to those of the current program.

Participation rates would rise the most under the free insurance option. This would occur mainly because participants in the free crop insurance program would have higher revenues, on average, than those outside the program. Harvested acreage would increase slightly under this option and market prices would fall slightly.

Farmers' participation in commodity programs likely would decrease slightly under the compulsory crop insurance program, primarily reflecting the cost of purchasing crop insurance. However, continued high participation in commodity programs under both the compulsory and the free crop insurance options probably would obviate the need for ad hoc disaster assistance.

Budget Effects: Disaster Assistance Program Most Costly

Government outlays for the four commodities would be highest under the permanent disaster assistance program option. Based on the simulations, the estimated average program costs for 1989 would have been \$9.7 billion, almost \$500 million more than the current program.

Government outlays under a free crop insurance program would also be more than under the current program. But payments under a disaster assistance option would exceed indemnity payments under a free crop insurance option. Increased program participation under free crop insurance would raise deficiency payments and loan outlays.

On average, compulsory crop insurance would be less costly to operate than the current program. While premium subsidy

costs and administrative costs would be greater, ad hoc disaster payments likely would be eliminated because of the high crop insurance participation. Further savings could be realized if commodity program participation decreased under the program.

Costs under a target revenue program likely would be little more than half the cost of the current program. Most of the reduction would be due to the decline in program participation.

But lower commodity program participation could boost nonparticipants' pressure for ad hoc disaster assistance. Basing target revenues on average yields rather than on lower program yields probably would increase the costs of a target revenue program to over 125 percent of current program costs.

The costs presented in the accompanying table reflect the average simulated Government outlays for 1989, and strongly depend on the assumed yield outcomes. The frequency of payments can differ considerably among the options. An ad hoc disaster program would require disaster payments in about 20 percent of the simulations, for instance, while a free crop insurance program would pay indemnities annually under most of the simulated yield outcomes.

Any New Program Must Balance Costs and Coverage Provided

For those interested in minimizing Government costs, the target revenue program clearly would be preferable; it results in costs less than half those of any other option when program yields are used. But lower Government costs would come at the expense of lower program participation, greater risk exposure to farmers, and lower farm income for both participants and nonparticipants.

On the other hand, those interested in greater risk protection to farmers through high participation rates probably would favor the free crop insurance program—but Government costs likely would be somewhat larger than under the current program.

Catastrophic risk protection for farmers requires balancing acceptable Federal budget exposure with the level and stability of protection offered. The program options discussed here could be tailored to balance these factors. In the end, however, policymakers may decide that making adjustments in the current crop insurance program is more desirable than switching to any of the four new alternatives. [Joe Glauber and Joy Harwood (202) 786-1840]

ERS-NASS Video Tapes

ERS: Economic Research for American Agriculture

An historical account of the role of economic research in the success of American agriculture.

16 1/2 minutes.

Order No. VT001 \$15.00

Today and Tomorrow

The U.S. Department of Agriculture's Outlook program analyzes the current situation for U.S. and world crops, and provides a forecast of future supplies and prices. "Today and Tomorrow" is an overview of the USDA Outlook program from its beginning in the 1920's, to the current comprehensive program of research and analysis.

23 minutes.

Order No. VT002 \$15.00

The Need To Know

Begins with a futuristic "what if?" opening, and then proceeds to outline the history, significance, and contributions of agricultural statistics and USDA's National Agricultural Statistics Service.

23 minutes.

Order no. VT003 \$15.00

Your Hometown

"Your Hometown" is an informative and entertaining look at small town rural America. Originally seen on public television stations nationwide, and narrated by James Whitmore, the program focuses on three rural communities where citizens use innovative thinking and teamwork to revitalize their own towns.

1 hour.

Order No. VT004 \$15.00

Alternative Agriculture: Growing Concerns

Can U.S. farmers produce at a profit while practicing low-input, sustainable agriculture (LISA)? "Growing Concerns" investigates the benefits and drawbacks of LISA. An excellent overview, this documentary was originally seen as a five-part series on national television.

19 minutes.

Order No. VT005 \$15.00

To order, call toll free,
1-800-999-6779 (8:30-5:00 E.T.)
or write: ERS-NASS
P.O. Box 1608
Rockville, MD 20849-1608

Statistical Indicators

Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

| | 1988 | | 1989 | | | | | 1990 | |
|--|---------|---------|---------|---------|---------|--------|---------|---------|---------|
| | IV | Annual | I | II | III | F | IV | Annual | F |
| Prices received by farmers (1977=100) | 144 | 138 | 149 | 148 | 137 | -- | -- | 140 | -- |
| Livestock & products | 152 | 150 | 159 | 156 | 151 | -- | -- | 154 | -- |
| Crops | 135 | 126 | 138 | 140 | 134 | -- | -- | 133 | -- |
| Prices paid by farmers, (1977=100) | | | | | | | | | |
| Production items | 162 | 157 | 163 | 165 | -- | -- | -- | 168 | -- |
| Commodities & services, interest, taxes, & wages | 173 | 170 | 175 | 178 | -- | -- | -- | 180 | -- |
| Cash receipts (\$ bil.) 1/ | 152 | 151 | 153 | 170 | 170 | -- | -- | 153-161 | -- |
| Livestock (\$ bil.) | 80 | 79 | 83 | 81 | 79 | -- | -- | 78-82 | -- |
| Crops (\$ bil.) | 72 | 73 | 70 | 89 | 91 | -- | -- | 75-79 | -- |
| Market basket (1982-84=100) | | | | | | | | | |
| Retail cost | 118 | 116 | 123 | 125 | -- | -- | -- | -- | -- |
| Farm value | 100 | 100 | 107 | 108 | -- | -- | -- | -- | -- |
| Spread | 128 | 124 | 131 | 133 | -- | -- | -- | -- | -- |
| Farm value/retail cost (%) | 30 | 30 | 30 | 30 | -- | -- | -- | -- | -- |
| Retail prices (1982-84=100) | | | | | | | | | |
| Food | 120 | 118 | 123 | 125 | 126 | 126 | 125 | -- | -- |
| At home | 119 | 117 | 122 | 124 | 124 | 124 | 123 | -- | -- |
| Away from home | 123 | 122 | 125 | 127 | 129 | 130 | 128 | -- | -- |
| Agricultural exports (\$ bil.) 2/ | 10.3 | 35.3 | 10.9 | 9.8 | 9.0 | 9.5 | 40.0 | -- | -- |
| Agricultural imports (\$ bil.) 2/ | 5.2 | 21.0 | 5.8 | 5.5 | 5.0 | 5.2 | 21.5 | -- | -- |
| Commercial production | | | | | | | | | |
| Red meat (mil. lb.) | 10,269 | 39,763 | 9,594 | 9,871 | 9,865 | 9,973 | 39,303 | 9,600 | 39,205 |
| Poultry (mil. lb.) | 5,180 | 20,587 | 5,070 | 5,538 | 5,723 | 5,590 | 21,921 | 5,510 | 23,425 |
| Eggs (mil. doz.) | 1,446 | 5,771 | 1,391 | 1,394 | 1,405 | 1,460 | 5,650 | 1,415 | 5,770 |
| Milk (bil. lb.) | 35.4 | 145.5 | 31.2 | 32.3 | 35.5 | 35.6 | 145.7 | 37.1 | 148.7 |
| Consumption, per capita | | | | | | | | | |
| Red meat and poultry (lb.) | 56.1 | 218.4 | 52.5 | 54.1 | 55.2 | 57.2 | 219.1 | 53.7 | 222.3 |
| Corn beginning stocks (mil. bu.) 3/ | 4,259.1 | 4,881.7 | 7,071.6 | 5,203.9 | 3,419.0 | -- | 4,259.1 | -- | -- |
| Corn use (mil. bu.) 3/ | 2,109.4 | 7,698.7 | 1,868.5 | 1,787.0 | -- | -- | -- | -- | -- |
| Prices 4/ | | | | | | | | | |
| Choice steers--Omaha (\$/cwt) | 70.14 | 69.54 | 73.67 | 73.85 | 70.71 | 72.76 | 72.74 | 73.79 | 71.77 |
| Barrows & gilts--7 mths. (\$/cwt) | 38.66 | 43.39 | 40.78 | 41.84 | 45.46 | 37.41 | 41.43 | 37.43 | 40.46 |
| Broilers--12-city (cts./lb.) | 57.9 | 56.3 | 59.4 | 67.1 | 58.59 | 54.58 | 59.61 | 50.56 | 49.55 |
| Eggs--NY Gr. A large (cts./doz.) | 67.3 | 62.1 | 78.6 | 75.2 | 80.81 | 68.72 | 75.77 | 65.71 | 62.68 |
| Milk--all at plant (\$/cwt) | 13.26 | 12.20 | 13.07 | 12.27 | 13.00- | 13.90- | 13.05- | 13.00- | 11.50- |
| | | | | | 13.20 | 14.70 | 13.30 | 14.00 | 12.50 |
| Wheat--Kansas City HRW ordinary (\$/bu.) | 4.12 | 3.56 | 4.34 | 4.44 | -- | -- | -- | -- | -- |
| Corn--Chicago (\$/bu.) | 2.75 | 2.39 | 2.72 | 2.76 | -- | -- | -- | -- | -- |
| Soybeans--Chicago (\$/bu.) | 7.91 | 7.33 | 7.63 | 7.39 | -- | -- | -- | -- | -- |
| Cotton--Avg. spot mkt. (cts./lb.) | 52.3 | 57.8 | 55.3 | 60.9 | 67.1 | -- | -- | -- | -- |
| | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 F |
| Gross cash income (\$ bil.) | 146.0 | 150.6 | 150.4 | 155.2 | 156.9 | 152.5 | 162.0 | 171.6 | 170-175 |
| Gross cash expenses (\$ bil.) | 113.2 | 112.8 | 113.5 | 116.6 | 110.2 | 100.7 | 104.3 | 111.7 | 116-120 |
| Net cash income (\$ bil.) | 32.8 | 37.8 | 36.9 | 38.6 | 46.7 | 51.8 | 57.7 | 59.9 | 52-57 |
| Net farm income (\$ bil.) | 26.9 | 25.5 | 12.7 | 32.2 | 32.4 | 38.0 | 47.1 | 45.7 | 48-53 |
| Farm real estate values 5/ | | | | | | | | | |
| Nominal (\$ per acre) | 819 | 823 | 788 | 782 | 679 | 595 | 547 | 564 | 597 |
| Real (1977 \$) | 551 | 513 | 472 | 448 | 376 | 322 | 290 | 288 | 291 |

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated.
 3/ Dec.-Feb. first quarter; Mar.-May second quarter; June-Aug. third quarter; Sept.-Nov. fourth quarter; Sept.-Aug. annual. Use includes exports & domestic disappearance. 4/ Simple averages. 5/ 1981 & 1986-89 values as of February 1. 1982-85 values as of April 1.
 F = forecast. -- = not available.

U.S. and Foreign Economic Data

Table 2.—U.S. Gross National Product & Related Data

| | Annual | | | 1988 | | | | 1989 | |
|--|---|---------|---------|---------|---------|---------|---------|---------|--|
| | 1986 | 1987 | 1988 | II | III | IV | I | II | |
| | \$ billion (quarterly data seasonally adjusted at annual rates) | | | | | | | | |
| Gross national product | 4,243.6 | 4,524.3 | 4,880.6 | 4,838.5 | 4,926.9 | 5,017.3 | 5,113.1 | 5,203.8 | |
| Personal consumption expenditures | 2,797.4 | 3,010.8 | 3,235.1 | 3,204.9 | 3,263.4 | 3,324.0 | 3,381.4 | 3,446.8 | |
| Durable goods | 406.0 | 421.0 | 455.2 | 454.6 | 452.5 | 467.4 | 466.4 | 471.0 | |
| Nondurable goods | 942.0 | 998.1 | 1,052.3 | 1,042.4 | 1,066.2 | 1,078.4 | 1,098.3 | 1,122.0 | |
| Clothing & shoes | 166.8 | 177.2 | 186.8 | 183.6 | 188.9 | 193.9 | 195.0 | 199.2 | |
| Food & beverages | 500.0 | 529.2 | 559.7 | 554.5 | 567.8 | 574.1 | 587.3 | 592.8 | |
| Services | 1,449.5 | 1,591.7 | 1,727.6 | 1,707.9 | 1,744.7 | 1,778.2 | 1,816.7 | 1,853.8 | |
| Gross private domestic investment | 659.4 | 699.9 | 750.3 | 748.4 | 771.1 | 752.8 | 769.6 | 774.7 | |
| Fixed investment | 652.5 | 670.6 | 719.6 | 719.1 | 726.5 | 734.1 | 742.0 | 747.4 | |
| Change in business inventories | 6.9 | 29.3 | 30.6 | 29.3 | 44.6 | 18.7 | 27.7 | 27.3 | |
| Net exports of goods & services | -97.4 | -112.6 | -73.7 | -74.9 | -66.2 | -70.8 | -54.0 | -52.7 | |
| Government purchases of goods & services | 872.2 | 926.1 | 968.9 | 960.1 | 958.6 | 1,011.4 | 1,016.0 | 1,034.9 | |
| 1982 \$ billion (quarterly data seasonally adjusted at annual rates) | | | | | | | | | |
| Gross national product | 3,717.9 | 3,853.7 | 4,024.4 | 4,010.7 | 4,042.7 | 4,069.4 | 4,106.8 | 4,134.0 | |
| Personal consumption expenditures | 2,446.4 | 2,513.7 | 2,598.4 | 2,586.8 | 2,608.1 | 2,627.7 | 2,641.0 | 2,655.3 | |
| Durable goods | 384.4 | 389.6 | 413.6 | 414.8 | 410.7 | 420.5 | 419.3 | 424.9 | |
| Nondurable goods | 878.1 | 890.4 | 904.5 | 899.2 | 910.3 | 912.0 | 915.0 | 910.0 | |
| Clothing & shoes | 157.4 | 159.6 | 161.3 | 157.1 | 164.1 | 164.6 | 165.0 | 166.2 | |
| Food & beverages | 447.1 | 452.7 | 460.0 | 459.8 | 461.9 | 462.1 | 466.0 | 461.9 | |
| Services | 1,183.8 | 1,233.7 | 1,280.2 | 1,272.8 | 1,287.0 | 1,295.2 | 1,306.7 | 1,320.4 | |
| Gross private domestic investment | 639.6 | 674.0 | 715.8 | 713.5 | 733.6 | 709.1 | 721.1 | 719.2 | |
| Fixed investment | 634.1 | 650.3 | 687.9 | 692.0 | 696.1 | 690.8 | 696.6 | 700.1 | |
| Change in business inventories | 5.6 | 23.7 | 27.9 | 21.5 | 37.5 | 18.3 | 24.5 | 19.0 | |
| Net exports of goods & services | -129.7 | -115.7 | -74.9 | -72.6 | -74.9 | -73.8 | -55.0 | -52.5 | |
| Government purchases of goods & services | 761.6 | 781.8 | 785.1 | 783.0 | 775.9 | 806.4 | 799.7 | 812.0 | |
| GNP implicit price deflator (% change) | 2.6 | 3.2 | 3.3 | 4.8 | 4.4 | 4.7 | 4.0 | 4.6 | |
| Disposable personal income (\$ bil.) | 3,013.3 | 3,205.9 | 3,477.8 | 3,435.9 | 3,511.7 | 3,587.4 | 3,689.5 | 3,747.0 | |
| Disposable per. income (1982 \$ bil.) | 2,635.3 | 2,676.6 | 2,793.2 | 2,773.3 | 2,806.4 | 2,835.9 | 2,881.7 | 2,886.6 | |
| Per capita disposable per. income (\$) | 12,469 | 13,140 | 14,116 | 13,966 | 14,235 | 14,504 | 14,884 | 15,081 | |
| Per capita dis. per. income (1982 \$) | 10,905 | 10,970 | 11,337 | 11,273 | 11,377 | 11,466 | 11,625 | 11,618 | |
| U.S. population, total, incl. military abroad (mil.) | 241.6 | 243.9 | 246.4 | 246.0 | 246.7 | 247.3 | 247.9 | 248.4 | |
| Civilian population (mil.) | 239.4 | 241.7 | 244.1 | 243.8 | 244.5 | 245.1 | 245.7 | 246.1 | |
| Monthly data seasonally adjusted | | | | | | | | | |
| Annual | | | | | | | | | |
| | 1986 | 1987 | 1988 | 1988 | 1988 | 1989 | 1989 | 1989 | |
| | | | | July | Apr | May | June | July P | |
| Industrial production (1977=100) | 125.1 | 129.8 | 137.2 | 138.0 | 141.7 | 141.6 | 141.4 | 141.7 | |
| Leading economic indicators (1982=100) | 132.1 | 139.6 | 142.5 | 142.7 | 145.6 | 143.7 | 143.7 | 144.0 | |
| Civilian employment (mil. persons) | 109.6 | 112.4 | 115.0 | 115.0 | 117.1 | 117.2 | 117.5 | 117.5 | |
| Civilian unemployment rate (%) | 7.0 | 6.2 | 5.5 | 5.4 | 5.3 | 5.2 | 5.3 | 5.2 | |
| Personal income (\$ bil. annual rate) | 3,526.2 | 3,777.6 | 4,064.5 | 4,079.8 | 4,386.8 | 4,395.7 | 4,416.2 | 4,449.0 | |
| Money stock-M2 (daily avg.) (\$ bil.) 1/ | 2,811.2 | 2,909.9 | 3,069.5 | 3,023.9 | 3,080.6 | 3,072.1 | 3,088.0 | 3,117.3 | |
| Three-month Treasury bill rate (%) | 5.98 | 5.82 | 6.69 | 6.73 | 8.70 | 8.40 | 8.22 | 7.92 | |
| AAA corporate bond yield (Moody's) (%) | 9.02 | 9.38 | 9.71 | 9.96 | 9.79 | 9.57 | 9.10 | 8.94 | |
| Housing starts (1,000) 2/ | 1,805 | 1,621 | 1,488 | 1,478 | 1,343 | 1,308 | 1,419 | 1,430 | |
| Auto sales at retail, total (mil.) | 11.4 | 10.3 | 10.6 | 10.6 | 10.8 | 10.3 | 9.8 | 10.2 | |
| Business inventory/sales ratio | 1.55 | 1.51 | 1.50 | 1.50 | 1.49 | 1.50 | 1.51 | -- | |
| Sales of all retail stores (\$ bil.) | 121.2 | 125.5 | 134.4 | 135.6 | 141.4 | 142.5 | 142.4 P | 143.7 | |
| Nondurable goods stores (\$ bil.) | 73.9 | 76.9 | 83.6 | 83.3 | 87.5 | 88.4 | 88.8 P | 89.2 | |
| Food stores (\$ bil.) | 24.6 | 25.3 | 27.6 | 27.7 | 29.2 | 29.6 | 29.6 P | 29.7 | |
| Eating & drinking places (\$ bil.) | 12.1 | 12.7 | 13.1 | 13.1 | 13.6 | 13.6 | 13.7 P | 13.9 | |
| Apparel & accessory stores (\$ bil.) | 6.7 | 7.1 | 7.0 | 6.8 | 7.2 | 7.3 | 7.4 P | 7.3 | |

1/ Annual data as of December of the year listed. 2/ Private, including farm. R = revised. P = preliminary. -- = not available.

Information contact: Ann Duncan (202) 786-3313.

Table 3.—Foreign Economic Growth, Inflation, & Export Earnings

| | Average 1975-79 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 P | 1990 F |
|-----------------------|--------------------|------|------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Annual percent change | | | | | | | | | | | | |
| Total foreign | | | | | | | | | | | | |
| Real GNP | 3.7 | 2.6 | 1.6 | 1.7 | 2.0 | 3.2 | 3.0 | 2.8 | 3.1 | 4.0 | 3.3 | 3.0 |
| CPI | 14.0 | 17.1 | 15.8 | 14.7 | 18.8 | 22.8 | 22.1 | 11.8 | 16.6 | 34.4 | 70.9 | 58.8 |
| Export earnings | 14.6 | 22.2 | -2.7 | -7.0 | -2.6 | 5.6 | 1.9 | 11.0 | 18.4 | 13.3 | 9.4 | 9.8 |
| Developed less U.S. | | | | | | | | | | | | |
| Real GNP | 3.1 | 2.4 | 1.4 | 1.1 | 1.9 | 3.4 | 3.3 | 2.4 | 3.1 | 3.9 | 3.6 | 2.7 |
| CPI | 9.4 | 10.9 | 9.6 | 8.0 | 6.0 | 5.1 | 4.7 | 2.8 | 2.6 | 2.9 | 4.2 | 3.6 |
| Export earnings | 14.9 | 17.0 | -3.3 | -4.3 | -0.5 | 6.3 | 4.6 | 19.4 | 17.6 | 12.5 | 8.1 | 10.4 |
| Centrally planned * | | | | | | | | | | | | |
| Real GNP | 3.3 | 3.8 | 1.1 | 2.4 | 2.0 | 3.8 | 1.1 | 2.4 | 2.3 | 4.0 | 3.8 | 4.3 |
| Export earnings | 16.1 | 16.5 | 3.4 | 6.0 | 8.2 | 1.5 | -5.1 | 7.3 | 6.7 | 3.5 | 5.9 | 7.6 |
| Latin America | | | | | | | | | | | | |
| Real GNP | 5.1 | 5.4 | 0.9 | -0.5 | -3.2 | 3.5 | 3.7 | 4.1 | 3.0 | 0.5 | -1.8 | 1.8 |
| CPI | 53.7 | 64.0 | 67.9 | 75.1 | 130.0 | 177.9 | 184.9 | 88.9 | 140.5 | 318.0 | 700.8 | 578.8 |
| Export earnings | 12.8 | 30.1 | 5.3 | -10.1 | -0.8 | 6.7 | -7.6 | -14.5 | 9.1 | 17.2 | 7.9 | 4.8 |
| Africa & Middle East | | | | | | | | | | | | |
| Real GNP | 6.4 | 1.3 | 0.0 | 1.4 | 0.1 | 1.1 | 0.0 | -1.2 | 1.4 | 3.4 | 3.6 | 3.3 |
| CPI | 16.4 | 24.6 | 17.3 | 12.9 | 16.7 | 19.4 | 11.2 | 11.7 | 13.3 | 23.7 | 20.7 | 17.4 |
| Export earnings | 13.2 | 37.9 | -9.2 | -19.7 | -17.5 | -6.1 | -4.0 | -20.9 | 16.1 | 18.8 | 5.9 | 4.8 |
| Asia | | | | | | | | | | | | |
| Real GNP | 6.8 | 6.3 | 6.6 | 3.6 | 6.6 | 5.4 | 4.0 | 5.8 | 7.0 | 8.8 | 6.4 | 5.7 |
| CPI | 8.4 | 14.2 | 14.1 | 7.3 | 7.7 | 8.5 | 5.2 | 4.5 | 5.5 | 6.7 | 7.9 | 7.9 |
| Export earnings | 18.6 | 27.8 | 6.8 | -0.3 | 3.4 | 13.1 | -1.2 | 6.0 | 28.0 | 25.4 | 14.9 | 12.0 |

* Includes People's Republic of China. P = preliminary. F = forecast.

Information contact: Timothy Baxter (202) 786-1706.

Farm Prices

Table 4.—Indexes of Prices Received & Paid by Farmers, U.S. Average

| | Annual | | | 1988 | 1989 | | | | | | |
|--|--------|-------|-------|------|------|-------|-----|------|--------|-------|--|
| | 1986 | 1987 | 1988 | Aug | Mar | Apr | May | June | July R | Aug P | |
| 1977=100 | | | | | | | | | | | |
| Prices received | | | | | | | | | | | |
| All farm products | 123 | 126 | 138 | 146 | 149 | 147 | 149 | 147 | 146 | 144 | |
| All crops | 107 | 106 | 126 | 136 | 136 | 140 | 141 | 138 | 134 | 128 | |
| Food grains | 109 | 103 | 137 | 147 | 162 | 161 | 160 | 154 | 153 | 155 | |
| Feed grains & hay | 98 | 85 | 120 | 138 | 138 | 139 | 138 | 131 | 126 | 119 | |
| Feed grains | 96 | 81 | 117 | 137 | 132 | 131 | 130 | 125 | 122 | 115 | |
| Cotton | 91 | 99 | 95 | 89 | 93 | 97 | 97 | 97 | 100 | 106 | |
| Tobacco | 138 | 129 | 132 | 131 | 143 | 144 | 144 | 144 | 143 | 141 | |
| Oil-bearing crops | 77 | 79 | 108 | 120 | 112 | 110 | 109 | 107 | 104 | 93 | |
| Fruit, all | 169 | 181 | 181 | 182 | 158 | 166 | 201 | 197 | 159 | 173 | |
| Fresh market 1/ | 177 | 194 | 194 | 197 | 166 | 176 | 216 | 212 | 163 | 179 | |
| Commercial vegetables | 130 | 144 | 142 | 153 | 149 | 171 | 153 | 152 | 168 | 143 | |
| Fresh market | 123 | 147 | 137 | 147 | 146 | 168 | 145 | 149 | 170 | 138 | |
| Potatoes & dry beans | 114 | 126 | 124 | 152 | 194 | 208 | 223 | 211 | 233 | 205 | |
| Livestock & products | 138 | 146 | 150 | 152 | 161 | 154 | 156 | 157 | 157 | 160 | |
| Meat animals | 145 | 163 | 168 | 169 | 176 | 170 | 171 | 172 | 174 | 177 | |
| Dairy products | 129 | 129 | 126 | 122 | 131 | 127 | 126 | 127 | 130 | 133 | |
| Poultry & eggs | 128 | 107 | 118 | 138 | 150 | 139 | 147 | 144 | 138 | 139 | |
| Prices paid | | | | | | | | | | | |
| Commodities & services, | | | | | | | | | | | |
| interest, taxes, & wage rates | 159 | 161 | 170 | -- | -- | 177 | -- | -- | 178 | -- | |
| Production items | 144 | 147 | 157 | -- | -- | 165 | -- | -- | 165 | -- | |
| Feed | 108 | 103 | 128 | -- | -- | 140 | -- | -- | 133 | -- | |
| Feeder livestock | 153 | 179 | 192 | -- | -- | 185 | -- | -- | 193 | -- | |
| Seed | 148 | 148 | 150 | -- | -- | 170 | -- | -- | 170 | -- | |
| Fertilizer | 124 | 118 | 130 | -- | -- | 141 | -- | -- | 141 | -- | |
| Agricultural chemicals | 127 | 124 | 126 | -- | -- | 133 | -- | -- | 133 | -- | |
| Fuels & energy | 162 | 161 | 163 | -- | -- | 185 | -- | -- | 188 | -- | |
| Farm & motor supplies | 144 | 145 | 148 | -- | -- | 155 | -- | -- | 155 | -- | |
| Autos & trucks | 198 | 208 | 215 | -- | -- | 226 | -- | -- | 225 | -- | |
| Tractors & self-propelled machinery | 174 | 174 | 181 | -- | -- | 192 | -- | -- | 192 | -- | |
| Other machinery | 182 | 185 | 197 | -- | -- | 209 | -- | -- | 209 | -- | |
| Building & fencing | 136 | 137 | 138 | -- | -- | 140 | -- | -- | 141 | -- | |
| Farm services & cash rent | 145 | 146 | 147 | -- | -- | 151 | -- | -- | 151 | -- | |
| Interest payable per acre on farm real estate debt | 211 | 190 | 186 | -- | -- | 190 | -- | -- | 190 | -- | |
| Taxes payable per acre on farm real estate | 138 | 139 | 142 | -- | -- | 144 | -- | -- | 144 | -- | |
| Wage rates (seasonally adjusted) | 160 | 167 | 172 | -- | -- | 186 | -- | -- | 186 | -- | |
| Production items, interest, taxes, & wage rates | 150 | 151 | 160 | -- | -- | 167 | -- | -- | 167 | -- | |
| Ratio, prices received to prices paid (X)2/ | 77 | 79 | 82 | 84 | 85 | 83 | 84 | 83 | 82 | 81 | |
| Prices received (1910-14=100) | 561 | 578 | 631 | 660 | 679 | 672 | 680 | 673 | 667 | 660 | |
| Prices paid, etc. (parity index) (1910-14=100) | 1,093 | 1,110 | 1,167 | -- | -- | 1,220 | -- | -- | 1,226 | -- | |
| Parity ratio (1910-14=100) (X)2/ | 51 | 52 | 54 | 56 | -- | 55 | -- | -- | 54 | -- | |

1/ Fresh market for noncitrus; fresh market & processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities and services, interest, taxes, and wage rates. Ratio derived using the most recent prices paid index. Prices paid data are quarterly and will be published in January, April, July, and October. P = preliminary. R = revised.

-- = not available.

Information contact: Ann Duncan (202) 786-3313.

Table 5.—Prices Received by Farmers, U.S. Average

| | Annual 1/ | | | 1988 | 1989 | | | | | |
|-----------------------------------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1986 | 1987 | 1988 | Aug | Mar | Apr | May | June | July R | Aug P |
| Crops | | | | | | | | | | |
| All wheat (\$/bu.) | 2.71 | 2.55 | 3.33 | 3.61 | 4.07 | 4.03 | 4.01 | 3.84 | 3.78 | 3.83 |
| Rice, rough (\$/cwt) | 5.04 | 4.59 | 7.79 | 7.43 | 6.47 | 6.66 | 6.76 | 6.94 | 7.33 | 7.20 |
| Corn (\$/bu.) | 1.96 | 1.56 | 2.27 | 2.65 | 2.59 | 2.56 | 2.58 | 2.52 | 2.47 | 2.29 |
| Sorghum (\$/cwt) | 3.11 | 2.56 | 3.66 | 4.41 | 4.03 | 4.16 | 4.02 | 3.90 | 3.99 | 3.89 |
| All hay, baled (\$/ton) | 61.64 | 62.42 | 78.17 | 82.10 | 98.10 | 104.00 | 104.00 | 94.80 | 85.40 | 82.80 |
| Soybeans (\$/bu.) | 5.00 | 5.08 | 7.21 | 8.33 | 7.51 | 7.29 | 7.21 | 7.06 | 6.83 | 5.93 |
| Cotton, upland (cts./lb.) | 54.8 | 59.6 | 57.2 | 53.9 | 56.3 | 58.9 | 58.8 | 58.8 | 60.6 | 64.3 |
| Potatoes (\$/cwt) | 5.03 | 4.35 | 5.49 | 5.86 | 7.45 | 8.15 | 8.94 | 8.45 | 9.47 | 8.18 |
| Lettuce (\$/cwt) | 11.90 | 14.70 | 15.20 | 13.00 | 13.60 | 9.07 | 7.48 | 13.50 | 16.30 | 11.40 |
| Tomatoes (\$/cwt) | 25.10 | 26.00 | 26.80 | 38.00 | 34.10 | 55.80 | 43.60 | 27.90 | 28.40 | 26.00 |
| Onions (\$/cwt) | 10.90 | 12.50 | 9.99 | 8.85 | 9.70 | 10.90 | 9.58 | 13.60 | 16.70 | 16.90 |
| Dry edible beans (\$/cwt) | 19.10 | 17.67 | 22.38 | 25.90 | 33.00 | 32.80 | 32.00 | 31.10 | 31.90 | 30.70 |
| Apples for fresh use (cts./lb.) | 19.8 | 17.6 | 16.7 | 24.5 | 16.1 | 14.6 | 14.1 | 10.8 | 9.8 | 16.1 |
| Pears for fresh use (\$/ton) | 369.00 | 227.00 | 347.00 | 326.00 | 328.00 | 290.00 | 448.00 | 493.00 | 480.00 | 398.00 |
| Oranges, all uses (\$/box) 2/ | 4.27 | 5.03 | 6.56 | 4.90 | 5.27 | 6.64 | 8.52 | 8.10 | 5.04 | 4.28 |
| Grapefruit, all uses (\$/box) 2/ | 4.29 | 4.96 | 5.39 | 4.09 | 3.36 | 3.28 | 4.05 | 4.85 | 4.62 | 7.24 |
| Livestock | | | | | | | | | | |
| Beef cattle (\$/cwt) | 52.80 | 61.40 | 66.80 | 65.90 | 72.00 | 70.00 | 68.80 | 67.60 | 68.00 | 69.60 |
| Calves (\$/cwt) | 60.90 | 78.10 | 89.80 | 91.00 | 94.00 | 90.50 | 91.20 | 94.20 | 94.70 | 94.50 |
| Hogs (\$/cwt) | 50.10 | 50.80 | 42.50 | 44.70 | 39.30 | 36.90 | 41.60 | 45.10 | 45.90 | 46.10 |
| Lambs (\$/cwt) | 69.10 | 77.90 | 69.50 | 59.80 | 72.50 | 75.20 | 73.10 | 70.60 | 68.60 | 67.40 |
| All milk, sold to plants (\$/cwt) | 12.50 | 12.53 | 12.22 | 11.80 | 12.70 | 12.30 | 12.20 | 12.30 | 12.60 | 12.90 |
| Milk, manuf. grade (\$/cwt) | 11.46 | 11.37 | 11.15 | 10.90 | 11.30 | 11.20 | 11.20 | 11.30 | 11.60 | 12.00 |
| Broilers (cts./lb.) | 34.5 | 28.8 | 34.0 | 42.3 | 38.7 | 38.9 | 45.2 | 42.6 | 39.1 | 36.1 |
| Eggs (cts./doz.) 3/ | 61.2 | 53.1 | 53.2 | 58.1 | 80.1 | 65.3 | 62.0 | 63.3 | 64.0 | 71.0 |
| Turkeys (cts./lb.) | 44.4 | 34.3 | 36.5 | 42.0 | 40.0 | 42.3 | 43.4 | 44.0 | 41.5 | 41.3 |
| Wool (cts./lb.) 4/ | 64.3 | 87.1 | 138.0 | 122.0 | 130.0 | 135.0 | 139.0 | 139.0 | 120.0 | 105.00 |

1/ Calendar year averages, except for potatoes, dry edible beans, apples, oranges, & grapefruit, which are crop years.
 2/ Equivalent on-tree returns. 3/ Average of all eggs sold by producers including hatching eggs & eggs sold at retail.
 4/ Average local market price, excluding incentive payments. P = preliminary. R = revised.

Information contact: Ann Duncan (202) 786-3313.

Producer & Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

| | Annual | 1988 | | 1989 | | | | | | |
|--|--------|-------|-------|-------------|-------|-------|-------|-------|-------|-------|
| | 1988 | July | Dec | Jan | Feb | Mar | Apr | May | June | July |
| | | | | 1982-84=100 | | | | | | |
| Consumer Price Index, all items | 118.3 | 118.5 | 120.5 | 121.1 | 121.6 | 122.3 | 123.1 | 123.8 | 124.1 | 124.4 |
| Consumer Price Index, less food | 118.3 | 118.4 | 120.4 | 120.8 | 121.3 | 122.0 | 122.9 | 123.5 | 123.9 | 124.2 |
| All food | 118.2 | 118.8 | 120.7 | 122.2 | 122.9 | 123.5 | 124.2 | 124.9 | 125.0 | 125.5 |
| Food away from home | 121.8 | 122.1 | 124.1 | 124.7 | 125.2 | 125.7 | 126.2 | 126.7 | 127.1 | 127.8 |
| Food at home | 116.6 | 117.3 | 119.1 | 121.2 | 122.0 | 122.7 | 123.5 | 124.4 | 124.3 | 124.8 |
| Meats 1/ | 112.2 | 113.4 | 112.7 | 114.0 | 114.3 | 115.5 | 115.6 | 115.6 | 116.1 | 116.7 |
| Beef & veal | 112.1 | 113.4 | 114.6 | 116.0 | 116.6 | 119.0 | 119.0 | 119.6 | 119.3 | 119.5 |
| Pork | 112.5 | 114.3 | 109.6 | 111.5 | 110.9 | 111.0 | 111.2 | 110.1 | 111.8 | 113.6 |
| Poultry | 120.7 | 129.0 | 127.1 | 128.8 | 128.4 | 130.3 | 133.0 | 137.3 | 140.1 | 138.1 |
| Fish | 137.4 | 138.1 | 138.9 | 144.0 | 142.9 | 144.3 | 143.3 | 142.3 | 142.9 | 142.3 |
| Eggs | 93.6 | 95.1 | 99.6 | 112.0 | 106.1 | 122.9 | 117.6 | 112.6 | 110.6 | 112.8 |
| Dairy products 2/ | 108.4 | 107.6 | 111.4 | 112.6 | 113.4 | 113.8 | 114.1 | 113.8 | 113.6 | 114.1 |
| Fats & oils 3/ | 113.1 | 112.6 | 118.5 | 119.6 | 120.5 | 120.4 | 121.6 | 121.6 | 121.6 | 121.6 |
| Fresh fruit | 143.0 | 147.8 | 143.2 | 145.4 | 150.0 | 149.5 | 152.4 | 158.1 | 151.7 | 150.6 |
| Processed fruit | 122.0 | 123.0 | 124.4 | 125.6 | 125.5 | 124.7 | 124.6 | 125.1 | 125.6 | 126.0 |
| Fresh vegetables | 129.3 | 127.0 | 133.0 | 141.4 | 144.4 | 140.2 | 144.1 | 153.2 | 150.8 | 150.8 |
| Potatoes | 119.1 | 125.7 | 128.5 | 130.8 | 138.3 | 146.6 | 158.9 | 164.0 | 172.5 | 180.7 |
| Processed vegetables | 112.2 | 111.3 | 118.9 | 120.9 | 121.8 | 122.7 | 124.4 | 124.9 | 125.5 | 126.3 |
| Cereals & bakery products | 122.1 | 122.1 | 126.6 | 127.9 | 128.9 | 129.7 | 130.4 | 131.5 | 132.1 | 133.3 |
| Sugar & sweets | 114.0 | 114.0 | 116.7 | 117.2 | 117.8 | 118.0 | 117.9 | 118.1 | 119.2 | 120.1 |
| Beverages, nonalcoholic | 107.5 | 107.2 | 107.8 | 109.6 | 111.3 | 111.3 | 111.8 | 111.5 | 111.6 | 112.3 |
| Apparel commodities less footwear | 114.4 | 111.3 | 116.8 | 113.5 | 113.4 | 118.1 | 120.0 | 119.3 | 116.1 | 112.8 |
| Footwear | 109.9 | 108.2 | 113.5 | 112.2 | 112.7 | 114.1 | 115.3 | 114.9 | 114.0 | 113.4 |
| Tobacco & smoking products | 145.8 | 147.5 | 149.9 | 157.0 | 158.5 | 159.2 | 159.5 | 161.1 | 164.2 | 167.5 |
| Beverages, alcoholic | 118.6 | 119.2 | 119.9 | 120.3 | 121.1 | 121.8 | 122.3 | 123.1 | 123.5 | 124.0 |

1/ Beef, veal, lamb, pork, & processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ann Duncan (202) 786-3313.

Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

| | Annual | | | 1988 | 1989 | | | | | |
|---|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 1986 | 1987 | 1988 | July | Feb. | Mar R | Apr | May | June | July |
| | 1982=100 | | | | | | | | | |
| Finished goods 1/ | 103.2 | 105.4 | 108.0 | 108.6 | 111.7 | 112.1 | 113.0 | 114.2 | 114.1 | 114.0 |
| Consumer foods | 107.2 | 109.5 | 112.6 | 113.6 | 117.2 | 118.3 | 117.8 | 119.1 | 118.4 | 119.0 |
| Fresh fruit | 112.9 | 112.0 | 112.7 | 117.7 | 113.2 | 113.5 | 104.5 | 109.4 | 112.2 | 114.1 |
| Fresh & dried vegetables | 97.8 | 103.7 | 105.4 | 104.7 | 133.3 | 123.8 | 119.3 | 142.9 | 128.9 | 124.6 |
| Dried fruit | 91.9 | 95.0 | 99.1 | 99.3 | 101.0 | 101.9 | 102.9 | 102.3 | 102.8 | 102.8 |
| Canned fruit & juice | 111.0 | 115.3 | 120.1 | 120.2 | 121.9 | 121.8 | 122.0 | 122.0 | 122.7 | 123.4 |
| Frozen fruit & juice | 103.0 | 113.3 | 129.9 | 130.4 | 122.1 | 121.1 | 119.6 | 122.3 | 128.4 | 129.0 |
| Fresh veg. excl. potatoes | 99.3 | 99.0 | 100.4 | 96.9 | 119.9 | 111.0 | 107.1 | 140.4 | 117.0 | 110.5 |
| Canned veg. & juices | 101.2 | 103.5 | 108.3 | 107.8 | 118.4 | 119.8 | 119.4 | 119.7 | 119.0 | 118.9 |
| Frozen vegetables | 106.6 | 107.3 | 108.5 | 107.3 | 114.5 | 114.8 | 115.3 | 115.3 | 115.7 | 115.5 |
| Potatoes | 104.0 | 120.1 | 114.1 | 104.2 | 178.3 | 162.0 | 152.7 | 150.8 | 161.8 | 157.8 |
| Eggs | 99.5 | 87.6 | 88.6 | 95.7 | 96.7 | 135.8 | 110.8 | 107.0 | 104.8 | 111.0 |
| Bakery products | 116.6 | 118.4 | 126.4 | 126.0 | 133.1 | 133.1 | 133.7 | 134.4 | 134.9 | 135.3 |
| Meats | 93.9 | 100.4 | 99.9 | 102.0 | 102.8 | 104.0 | 103.2 | 103.5 | 103.4 | 105.8 |
| Beef & veal | 88.1 | 95.5 | 101.4 | 101.4 | 108.1 | 111.3 | 112.2 | 111.7 | 106.6 | 108.1 |
| Pork | 99.9 | 104.9 | 95.2 | 101.7 | 93.6 | 92.4 | 88.5 | 90.0 | 96.9 | 101.9 |
| Processed poultry | 116.7 | 103.4 | 111.4 | 124.9 | 116.3 | 123.2 | 125.1 | 132.2 | 130.6 | 125.9 |
| Fish | 124.9 | 140.0 | 151.7 | 142.6 | 152.7 | 153.2 | 158.3 | 157.5 | 139.1 | 137.3 |
| Dairy products | 99.9 | 101.6 | 102.2 | 101.2 | 106.5 | 106.0 | 105.5 | 105.7 | 106.4 | 107.8 |
| Processed fruits & vegetables | 104.9 | 108.6 | 113.8 | 113.4 | 118.8 | 119.2 | 119.1 | 119.9 | 120.7 | 120.8 |
| Shortening & cooking oil | 103.3 | 103.9 | 118.9 | 126.8 | 115.4 | 117.9 | 117.9 | 119.3 | 116.7 | 117.1 |
| Consumer finished goods less foods | 98.4 | 100.7 | 103.1 | 103.8 | 106.6 | 106.8 | 108.9 | 110.4 | 110.3 | 109.7 |
| Beverages, alcoholic | 110.1 | 110.3 | 111.9 | 111.5 | 113.9 | 115.1 | 115.5 | 116.5 | 116.8 | 116.9 |
| Soft drinks | 109.5 | 111.8 | 114.1 | 113.2 | 116.6 | 117.3 | 118.4 | 118.0 | 117.4 | 117.5 |
| Apparel | 106.3 | 108.3 | 111.7 | 112.1 | 114.1 | 113.7 | 114.0 | 114.2 | 114.1 | 114.2 |
| Footwear | 106.8 | 109.3 | 115.2 | 115.5 | 119.5 | 119.8 | 119.4 | 119.8 | 120.1 | 120.6 |
| Tobacco products | 142.4 | 154.6 | 171.9 | 175.4 | 187.3 | 187.3 | 187.4 | 187.4 | 196.8 | 196.8 |
| Intermediate materials 2/ | 99.1 | 101.5 | 107.1 | 108.2 | 111.0 | 111.5 | 112.3 | 112.7 | 112.6 | 112.6 |
| Materials for food manufacturing | 98.4 | 100.8 | 106.0 | 109.9 | 110.1 | 111.4 | 111.5 | 112.4 | 112.1 | 112.9 |
| Flour | 94.5 | 92.9 | 105.7 | 111.0 | 114.1 | 116.5 | 113.7 | 115.9 | 116.5 | 115.0 |
| Refined sugar 3/ | 103.2 | 106.4 | 108.6 | 108.2 | 115.8 | 116.0 | 116.1 | 117.0 | 116.9 | 118.1 |
| Crude vegetable oils | 84.8 | 84.2 | 116.8 | 147.6 | 103.7 | 109.8 | 107.4 | 114.7 | 103.1 | 100.3 |
| Crude materials 4/ | 87.7 | 93.7 | 96.0 | 97.3 | 101.2 | 103.2 | 104.1 | 106.3 | 103.9 | 103.7 |
| Foodstuffs & feedstuffs | 93.2 | 98.2 | 106.0 | 110.1 | 111.0 | 113.7 | 111.4 | 115.0 | 111.4 | 109.7 |
| Fruits & vegetables 5/ | 103.9 | 106.8 | 108.1 | 109.9 | 123.8 | 118.7 | 112.3 | 127.5 | 121.0 | 119.4 |
| Grains | 79.2 | 71.1 | 97.9 | 111.5 | 111.3 | 115.1 | 109.8 | 114.1 | 105.8 | 105.1 |
| Livestock | 91.8 | 102.0 | 103.0 | 99.7 | 104.6 | 106.8 | 105.9 | 106.9 | 105.5 | 104.3 |
| Poultry, live | 129.6 | 101.2 | 121.5 | 156.4 | 121.5 | 138.5 | 138.4 | 155.0 | 148.5 | 135.5 |
| Fibers, plant & animal | 88.3 | 106.4 | 98.4 | 99.4 | 94.8 | 98.4 | 105.0 | 108.1 | 110.5 | 111.4 |
| Fluid milk | 90.9 | 91.8 | 89.1 | 84.9 | 94.7 | 91.3 | 90.0 | 89.7 | 90.3 | 92.1 |
| Oilseeds | 91.4 | 99.2 | 134.0 | 152.3 | 133.2 | 140.0 | 130.7 | 137.5 | 127.5 | 129.7 |
| Tobacco, leaf | 89.7 | 85.7 | 87.2 | 82.0 | 93.1 | 93.1 | 93.1 | 93.7 | 93.7 | 93.7 |
| Sugar, raw cane | 104.9 | 110.2 | 111.9 | 118.0 | 111.9 | 112.3 | 112.3 | 113.8 | 115.4 | 118.5 |
| All commodities | 100.1 | 102.8 | 106.9 | 107.9 | 110.8 | 111.5 | 112.3 | 113.1 | 112.8 | 112.7 |
| Industrial commodities | 99.9 | 102.5 | 106.3 | 106.8 | 110.1 | 110.5 | 111.7 | 112.4 | 112.3 | 112.2 |
| All foods 6/ | 105.5 | 107.8 | 111.5 | 113.3 | 117.4 | 116.8 | 118.4 | 117.4 | 118.1 | |
| Farm products & processed foods & feeds | 101.2 | 103.7 | 110.0 | 112.9 | 114.6 | 116.1 | 115.1 | 116.9 | 115.2 | 115.4 |
| Farm products | 92.9 | 95.5 | 104.8 | 109.1 | 110.8 | 113.8 | 110.5 | 114.9 | 111.4 | 110.0 |
| Processed foods & feeds 6/ | 105.4 | 107.9 | 112.8 | 115.0 | 116.6 | 117.5 | 117.5 | 118.1 | 117.3 | 118.2 |
| Cereal & bakery products | 111.0 | 112.6 | 122.9 | 124.1 | 129.0 | 129.2 | 129.3 | 130.8 | 130.8 | 132.1 |
| Sugar & confectionery | 109.6 | 112.6 | 114.6 | 115.9 | 118.3 | 118.6 | 120.0 | 119.6 | 120.6 | 121.5 |
| Beverages | 114.5 | 112.5 | 114.3 | 113.8 | 117.7 | 118.7 | 119.4 | 119.5 | 119.6 | 119.3 |

1/ Commodities ready for sale to ultimate consumer. 2/ Commodities requiring further processing to become finished goods. 3/ All types & sizes of refined sugar. 4/ Products entering market for the first time that have not been manufactured at that point. 5/ Fresh & dried. 6/ Includes all raw, intermediate, & processed foods (excludes soft drinks, alcoholic beverages, & manufactured animal feeds). R = revised.

Information contact: Ann Duncan (202) 786-3313.

Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads

| | Annual | | | | 1988 | 1989 | | | | | |
|----------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 1985 | 1986 | 1987 | 1988 | July | Feb | Mar | Apr | May | June | July |
| Market basket 1/ | | | | | | | | | | | |
| Retail cost (1982-84=100) | 104.1 | 106.3 | 111.6 | 116.5 | 117.3 | 122.3 | 122.9 | 123.6 | 124.7 | 124.7 | 125.2 |
| Farm value (1982-84=100) | 96.2 | 94.9 | 97.1 | 100.3 | 103.8 | 106.4 | 107.2 | 106.6 | 108.7 | 106.7 | 107.4 |
| Farm-retail spread (1982-84=100) | 108.3 | 112.5 | 119.4 | 125.3 | 124.6 | 130.8 | 131.4 | 132.7 | 133.3 | 134.5 | 134.7 |
| Farm value-retail cost (%) | 32.4 | 31.2 | 30.5 | 30.1 | 31.0 | 30.5 | 30.5 | 30.2 | 30.5 | 29.9 | 30.0 |
| Meat products | | | | | | | | | | | |
| Retail cost (1982-84=100) | 98.9 | 102.0 | 109.6 | 112.2 | 113.4 | 114.3 | 115.5 | 115.6 | 115.6 | 116.1 | 116.7 |
| Farm value (1982-84=100) | 91.3 | 94.3 | 101.2 | 99.5 | 97.5 | 102.6 | 103.7 | 103.4 | 103.2 | 103.6 | 103.6 |
| Farm-retail spread (1982-84=100) | 106.7 | 109.8 | 118.3 | 125.2 | 129.7 | 126.3 | 127.6 | 128.1 | 128.3 | 128.9 | 130.3 |
| Farm value-retail cost (%) | 46.8 | 46.8 | 46.7 | 44.9 | 43.6 | 45.5 | 45.5 | 45.3 | 45.2 | 45.2 | 44.9 |
| Dairy products | | | | | | | | | | | |
| Retail cost (1982-84=100) | 103.2 | 103.3 | 105.9 | 108.4 | 107.6 | 113.4 | 113.8 | 114.1 | 113.8 | 113.6 | 114.1 |
| Farm value (1982-84=100) | 95.2 | 92.6 | 93.3 | 90.4 | 86.9 | 97.7 | 94.3 | 93.0 | 91.7 | 92.5 | 92.0 |
| Farm-retail spread (1982-84=100) | 110.5 | 113.3 | 117.5 | 124.9 | 126.7 | 127.9 | 131.7 | 133.5 | 134.2 | 133.0 | 134.5 |
| Farm value-retail cost (%) | 44.2 | 43.0 | 42.3 | 40.0 | 38.7 | 41.3 | 39.8 | 39.1 | 38.6 | 39.1 | 38.7 |
| Poultry | | | | | | | | | | | |
| Retail cost (1982-84=100) | 106.2 | 114.2 | 112.6 | 120.7 | 129.0 | 128.4 | 130.3 | 133.0 | 137.3 | 140.1 | 138.1 |
| Farm value (1982-84=100) | 105.9 | 115.1 | 93.8 | 110.4 | 133.2 | 113.9 | 124.3 | 125.9 | 143.5 | 136.8 | 126.1 |
| Farm-retail spread (1982-84=100) | 106.6 | 113.3 | 134.2 | 132.6 | 124.2 | 145.1 | 137.3 | 141.2 | 130.1 | 143.9 | 152.0 |
| Farm value-retail cost (%) | 53.3 | 53.9 | 44.6 | 49.0 | 55.3 | 47.5 | 51.0 | 50.7 | 55.9 | 52.2 | 48.9 |
| Eggs | | | | | | | | | | | |
| Retail cost (1982-84=100) | 91.0 | 97.2 | 91.5 | 93.6 | 95.1 | 106.1 | 122.9 | 117.6 | 112.6 | 110.6 | 112.8 |
| Farm value (1982-84=100) | 85.7 | 92.4 | 76.8 | 76.7 | 84.9 | 92.3 | 128.0 | 99.8 | 93.3 | 95.5 | 97.3 |
| Farm-retail spread (1982-84=100) | 100.4 | 106.0 | 117.9 | 123.9 | 113.4 | 130.9 | 113.7 | 149.5 | 147.2 | 137.7 | 140.7 |
| Farm value-retail cost (%) | 60.5 | 61.0 | 53.9 | 52.7 | 57.4 | 55.9 | 66.9 | 54.5 | 53.2 | 55.5 | 55.4 |
| Cereal & bakery products | | | | | | | | | | | |
| Retail cost (1982-84=100) | 107.9 | 110.9 | 114.8 | 122.1 | 122.1 | 128.9 | 129.7 | 130.4 | 131.5 | 132.1 | 133.3 |
| Farm value (1982-84=100) | 94.3 | 76.3 | 71.0 | 92.3 | 99.5 | 101.0 | 103.1 | 103.3 | 104.3 | 103.5 | 101.6 |
| Farm-retail spread (1982-84=100) | 109.8 | 115.7 | 120.9 | 126.3 | 125.3 | 132.8 | 133.4 | 134.2 | 135.3 | 136.1 | 137.7 |
| Farm value-retail cost (%) | 10.7 | 8.4 | 7.6 | 9.3 | 10.0 | 9.6 | 9.7 | 9.7 | 9.7 | 9.6 | 9.3 |
| Fresh fruits | | | | | | | | | | | |
| Retail cost (1982-84=100) | 118.4 | 120.4 | 135.6 | 145.4 | 150.7 | 154.3 | 151.6 | 151.0 | 157.3 | 152.6 | 152.3 |
| Farm value (1982-84=100) | 110.8 | 103.8 | 113.9 | 113.3 | 134.4 | 101.5 | 92.3 | 82.8 | 95.8 | 86.9 | 98.8 |
| Farm-retail spread (1982-84=100) | 121.8 | 128.0 | 145.7 | 160.2 | 158.2 | 178.7 | 179.0 | 182.5 | 185.7 | 182.9 | 177.0 |
| Farm value-retail cost (%) | 29.6 | 27.4 | 26.5 | 24.6 | 28.2 | 20.8 | 19.2 | 17.3 | 19.2 | 18.0 | 20.5 |
| Fresh vegetables | | | | | | | | | | | |
| Retail cost (1982-84=100) | 103.5 | 107.7 | 121.6 | 129.3 | 127.0 | 144.4 | 140.2 | 144.1 | 153.2 | 150.8 | 150.8 |
| Farm value (1982-84=100) | 93.1 | 90.0 | 112.0 | 105.8 | 101.6 | 144.5 | 120.1 | 142.7 | 153.4 | 133.0 | 158.0 |
| Farm-retail spread (1982-84=100) | 108.9 | 116.8 | 126.5 | 141.3 | 140.1 | 144.3 | 150.5 | 144.8 | 153.1 | 160.0 | 147.1 |
| Farm value-retail cost (%) | 30.5 | 28.4 | 31.3 | 27.8 | 27.2 | 34.0 | 29.1 | 33.6 | 34.0 | 29.9 | 35.6 |
| Processed fruits & vegetables | | | | | | | | | | | |
| Retail cost (1982-84=100) | 107.0 | 105.3 | 109.0 | 117.6 | 117.8 | 123.7 | 123.7 | 124.3 | 124.9 | 125.4 | 126.0 |
| Farm value (1982-84=100) | 117.7 | 101.5 | 111.1 | 136.5 | 140.1 | 135.4 | 134.4 | 131.9 | 132.8 | 132.9 | 135.0 |
| Farm-retail spread (1982-84=100) | 103.7 | 106.4 | 108.3 | 111.7 | 110.8 | 120.0 | 120.4 | 121.6 | 122.4 | 123.1 | 123.2 |
| Farm value-retail cost (%) | 26.2 | 22.9 | 24.2 | 27.6 | 28.3 | 26.0 | 25.8 | 25.4 | 25.3 | 25.2 | 25.5 |
| Fats & oils | | | | | | | | | | | |
| Retail cost (1982-84=100) | 108.9 | 106.5 | 108.1 | 113.1 | 112.6 | 120.5 | 120.4 | 121.6 | 121.6 | 121.6 | 121.6 |
| Farm value (1982-84=100) | 104.3 | 76.2 | 74.1 | 103.3 | 132.6 | 99.2 | 103.1 | 105.4 | 104.6 | 99.2 | 91.3 |
| Farm-retail spread (1982-84=100) | 110.6 | 117.6 | 120.6 | 116.7 | 105.2 | 128.3 | 126.8 | 127.6 | 127.8 | 129.8 | 132.8 |
| Farm value-retail cost (%) | 25.8 | 19.2 | 18.6 | 24.6 | 31.7 | 22.2 | 23.0 | 23.3 | 23.1 | 21.9 | 20.2 |

| | Annual | | | | 1988 | 1989 | | | | | |
|-----------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 1985 | 1986 | 1987 | 1988 | July | Feb | Mar | Apr | May | June | July |
| Beef, Choice | | | | | | | | | | | |
| Retail price 2/ (cts./lb.) | 232.6 | 230.7 | 242.5 | 254.7 | 259.3 | 265.2 | 269.5 | 269.8 | 271.9 | 268.1 | 271.6 |
| Net carcass value 3/ (cts.) | 135.2 | 133.1 | 145.3 | 153.9 | 144.6 | 160.9 | 167.4 | 169.5 | 167.7 | 158.5 | 156.4 |
| Net farm value 4/ (cts.) | 126.8 | 124.4 | 137.9 | 147.4 | 137.9 | 157.6 | 163.9 | 164.3 | 160.9 | 152.5 | 149.9 |
| Farm-retail spread (cts.) | 105.8 | 106.3 | 104.6 | 107.3 | 121.3 | 107.6 | 105.6 | 105.5 | 111.0 | 115.6 | 121.7 |
| Carcass-retail spread 5/ (cts.) | 97.4 | 97.6 | 97.2 | 100.8 | 114.7 | 104.3 | 102.1 | 100.3 | 104.2 | 109.6 | 115.2 |
| Farm-carcass spread 6/ (cts.) | 8.4 | 8.7 | 7.4 | 6.5 | 6.7 | 3.3 | 3.5 | 5.2 | 6.8 | 6.0 | 6.5 |
| Farm value-retail price (%) | 55 | 54 | 57 | 58 | 53 | 59 | 61 | 61 | 59 | 57 | 55 |
| Pork | | | | | | | | | | | |
| Retail price 2/ (cts./lb.) | 162.0 | 178.4 | 188.4 | 183.4 | 187.4 | 179.3 | 179.7 | 179.5 | 177.1 | 179.1 | 182.8 |
| Wholesale value 3/ (cts.) | 101.1 | 110.9 | 113.0 | 101.0 | 100.0 | 92.7 | 91.8 | 88.6 | 95.5 | 99.6 | 100.6 |
| Net farm value 4/ (cts.) | 71.4 | 82.4 | 82.7 | 69.4 | 72.6 | 65.2 | 63.3 | 59.0 | 68.4 | 74.0 | 75.2 |
| Farm-retail spread (cts.) | 90.6 | 96.0 | 105.7 | 114.0 | 114.8 | 114.1 | 116.4 | 120.5 | 108.7 | 105.1 | 107.6 |
| Wholesale-retail spread 5/ (cts.) | 60.9 | 67.5 | 75.4 | 82.4 | 87.4 | 86.6 | 87.9 | 90.9 | 81.6 | 79.5 | 82.2 |
| Farm-wholesale spread 6/ (cts.) | 29.7 | 28.5 | 30.3 | 31.6 | 27.4 | 27.5 | 28.5 | 29.6 | 27.1 | 25.6 | 25.4 |
| Farm value-retail price (%) | 44 | 46 | 44 | 38 | 39 | 36 | 35 | 33 | 39 | 41 | 41 |

1/ Retail costs are based on indexes of retail prices for domestically produced farm foods from the CPI-U published monthly by the Bureau of Labor Statistics. The farm value is the payment to farmers for quantity of farm product equivalent to retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale & may include marketing charges such as grading & packing for some commodities. The farm-retail spread is the difference between the retail price & the farm value, represents charges for assembling, processing, transporting, distributing these foods. 2/ Estimated weighted average price of retail cuts from pork & choice yield grade 3 beef carcasses. Retail cut prices from BLS. 3/ Value of carcass quantity (beef) & wholesale cuts (pork) equivalent to 1 lb. of retail cuts; beef adjusted for value of fat & bone byproducts. 4/ Market value to producer for quantity of live animal equivalent to 1 lb. of retail cuts minus value of byproducts. 5/ Represents charges for retailing & other marketing services such as fabricating, wholesaling, in-city transportation. 6/ Represents charges made for livestock marketing, processing, & transportation to city where consumed.

Information contacts: Denis Dunham (202) 786-1870, Ron Gustafson (202) 786-1286.

Table 9.—Price Indexes of Food Marketing Costs

(See the September 1989 Issue.)

Information contact: Denis Dunham (202) 786-1870.

Livestock & Products

Table 10.—U.S. Meat Supply & Use

| | Beg. stocks | Pro- duc- tion 1/ | Im- ports | Total supply | Ex- ports | Ship- ments | Ending stocks | Consumption | | Primary market price 3/ |
|-------------------------------|-------------------|-------------------------|--------------|-----------------|--------------|----------------|------------------|-------------|----------------------------|-------------------------------|
| | | | | | | | | Total | Per capita 2/ Pounds | |
| | Million pounds 4/ | | | | | | | | | |
| Beef | | | | | | | | | | |
| 1986 | 420 | 24,371 | 2,129 | 26,919 | 521 | 52 | 412 | 25,935 | 78.4 | 57.75 |
| 1987 | 412 | 23,566 | 2,269 | 26,247 | 604 | 52 | 386 | 25,205 | 73.4 | 64.60 |
| 1988 | 386 | 23,589 | 2,379 | 26,354 | 680 | 64 | 422 | 25,188 | 72.1 | 69.54 |
| 1989 F | 422 | 22,921 | 2,180 | 25,523 | 905 | 60 | 325 | 24,233 | 68.7 | 72-74 |
| Pork | | | | | | | | | | |
| 1986 | 289 | 14,063 | 1,122 | 15,474 | 86 | 132 | 248 | 15,008 | 58.6 | 51.19 |
| 1987 | 248 | 14,374 | 1,195 | 15,817 | 109 | 124 | 347 | 15,237 | 59.1 | 51.69 |
| 1988 | 347 | 15,684 | 1,137 | 17,168 | 195 | 126 | 413 | 16,434 | 63.1 | 43.39 |
| 1989 F | 413 | 15,926 | 1,000 | 17,339 | 200 | 140 | 370 | 16,629 | 63.4 | 41-43 |
| Veal 5/ | | | | | | | | | | |
| 1986 | 11 | 524 | 27 | 562 | 5 | 1 | 7 | 550 | 1.9 | 60.89 |
| 1987 | 7 | 429 | 24 | 460 | 7 | 1 | 4 | 449 | 1.5 | 78.05 |
| 1988 | 4 | 396 | 27 | 427 | 10 | 2 | 5 | 410 | 1.4 | 89.79 |
| 1989 F | 5 | 360 | 0 | 365 | 0 | 1 | 5 | 359 | 1.2 | 93-95 |
| Lamb & mutton | | | | | | | | | | |
| 1986 | 13 | 338 | 41 | 392 | 2 | 2 | 13 | 375 | 1.4 | 70.26 |
| 1987 | 13 | 315 | 44 | 372 | 2 | 2 | 8 | 360 | 1.3 | 78.09 |
| 1988 | 8 | 335 | 51 | 394 | 1 | 1 | 6 | 386 | 1.4 | 68.84 |
| 1989 F | 6 | 337 | 55 | 398 | 1 | 0 | 7 | 390 | 1.4 | 66-68 |
| Total red meat | | | | | | | | | | |
| 1986 | 733 | 39,296 | 3,319 | 43,348 | 613 | 187 | 680 | 41,868 | 140.2 | -- |
| 1987 | 679 | 38,684 | 3,533 | 42,897 | 722 | 179 | 744 | 41,251 | 135.3 | -- |
| 1988 | 745 | 40,004 | 3,594 | 44,343 | 886 | 193 | 846 | 42,418 | 137.9 | -- |
| 1989 F | 846 | 39,544 | 3,235 | 43,625 | 1,106 | 201 | 707 | 41,611 | 134.7 | -- |
| Broilers | | | | | | | | | | |
| 1986 | 27 | 14,316 | 0 | 14,342 | 566 | 149 | 24 | 13,603 | 56.3 | 56.9 |
| 1987 | 24 | 15,594 | 0 | 15,618 | 752 | 151 | 25 | 14,691 | 60.2 | 47.4 |
| 1988 | 25 | 16,180 | 0 | 16,205 | 765 | 156 | 36 | 15,248 | 61.9 | 56.3 |
| 1989 F | 36 | 17,295 | 0 | 17,331 | 900 | 140 | 30 | 16,260 | 65.4 | 59-61 |
| Mature chicken | | | | | | | | | | |
| 1986 | 144 | 627 | 0 | 771 | 16 | 3 | 163 | 589 | 2.4 | -- |
| 1987 | 163 | 650 | 0 | 814 | 15 | 2 | 188 | 608 | 2.5 | -- |
| 1988 | 188 | 638 | 0 | 826 | 26 | 3 | 157 | 641 | 2.6 | -- |
| 1989 F | 157 | 632 | 0 | 788 | 22 | 4 | 150 | 613 | 2.5 | -- |
| Turkeys | | | | | | | | | | |
| 1986 | 150 | 3,271 | 0 | 3,422 | 27 | 4 | 178 | 3,212 | 13.3 | 72.2 |
| 1987 | 178 | 3,828 | 0 | 4,006 | 33 | 4 | 282 | 3,686 | 15.1 | 57.8 |
| 1988 | 282 | 3,968 | 0 | 4,250 | 51 | 5 | 250 | 3,945 | 16.0 | 61.3 |
| 1989 F | 250 | 4,195 | 0 | 4,445 | 38 | 4 | 290 | 4,113 | 16.5 | 64-66 |
| Total poultry | | | | | | | | | | |
| 1986 | 321 | 18,215 | 0 | 18,535 | 609 | 156 | 365 | 17,405 | 72.0 | -- |
| 1987 | 365 | 20,072 | 0 | 20,437 | 800 | 157 | 495 | 18,985 | 77.8 | -- |
| 1988 | 495 | 20,786 | 0 | 21,281 | 842 | 163 | 442 | 19,834 | 80.5 | -- |
| 1989 F | 442 | 22,122 | 0 | 22,564 | 960 | 148 | 470 | 20,986 | 84.4 | -- |
| Red meat & poultry | | | | | | | | | | |
| 1986 | 1,054 | 57,511 | 3,319 | 61,883 | 1,223 | 343 | 1,045 | 59,273 | 212.3 | -- |
| 1987 | 1,044 | 58,756 | 3,532 | 63,333 | 1,521 | 336 | 1,240 | 60,229 | 213.2 | -- |
| 1988 | 1,240 | 60,790 | 3,594 | 65,624 | 1,728 | 356 | 1,288 | 62,251 | 218.4 | -- |
| 1989 F | 1,288 | 61,666 | 3,235 | 66,189 | 2,066 | 349 | 1,177 | 62,597 | 219.1 | -- |

1/ Total including farm production for red meats & federally inspected plus nonfederally inspected for poultry.
 2/ Retail weight basis. (The beef carcass-to-retail conversion factor was .74 during 1962-85. It was lowered to .73 for 1986, .71 for 1987, & 70.5 for 1988 & 89.) 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Choice steers, Omaha 1,000-1,100 lb.; pork: barrows and gilts, 7 markets; veal: farm price of calves; lamb & mutton: Choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats & certified ready-to-cook for poultry. 5/ Beginning 1989 veal trade no longer reported separately. F = forecast. -- = not available.

Information contacts: Ron Gustafson, Leland Southard, or Mark Weimar (202) 786-1285.

Table 11.—U.S. Egg Supply & Use

| | Beg. stocks | Pro- duc- tion | Im- ports | Total supply | Ex- ports | Ship- ments | Hatch- ing use | Ending stocks | Consumption | | Wholesale price* |
|---------------|----------------|----------------------|--------------|-----------------|--------------|----------------|----------------------|------------------|-------------|---------------|---------------------|
| | | | | | | | | | Total | Per capita | |
| | | | | | | | | | | No. | |
| Million dozen | | | | | | | | | | | |
| 1984 | 9.3 | 5,708.3 | 32.0 | 5,749.7 | 58.2 | 27.8 | 529.7 | 11.1 | 5,122.8 | 259.4 | 80.9 |
| 1985 | 11.1 | 5,688.0 | 12.7 | 5,711.8 | 70.6 | 30.3 | 548.1 | 10.7 | 5,052.0 | 253.3 | 66.4 |
| 1986 | 10.7 | 5,705.0 | 13.7 | 5,729.4 | 101.6 | 28.0 | 566.8 | 10.4 | 5,022.6 | 249.4 | 71.1 |
| 1987 | 10.4 | 5,802.3 | 5.6 | 5,818.3 | 111.2 | 25.1 | 599.1 | 14.4 | 5,068.5 | 249.3 | 61.6 |
| 1988 | 14.4 | 5,771.1 | 5.3 | 5,790.8 | 141.8 | 26.0 | 604.9 | 15.2 | 5,002.9 | 243.7 | 62.1 |
| 1989 F | 15.2 | 5,649.9 | 16.1 | 5,681.2 | 112.9 | 24.0 | 635.1 | 10.0 | 4,899.1 | 236.4 | 74-78 |

* Cartoned grade A large eggs, New York. F = forecast.

Information contact: Maxine Davis (202) 786-1714.

Table 12.—U.S. Milk Supply & Use¹

| | Pro-duction | Farm use | Commercial | | | Total commercial supply | CCC net re-movals | Commercial | | All milk price 2/ \$/cwt |
|--------|-------------|----------|------------------|-------------|----------|-------------------------|-------------------|---------------|----------------|-----------------------------|
| | | | Farm market-ings | Beg. stocks | Im-ports | | | Ending stocks | Disap-pearance | |
| | | | Billion pounds | | | | | | | |
| 1981 | 132.8 | 2.3 | 130.5 | 5.8 | 2.3 | 138.5 | 12.9 | 5.4 | 120.3 | 13.77 |
| 1982 | 135.5 | 2.4 | 133.1 | 5.4 | 2.5 | 141.0 | 14.3 | 4.6 | 122.1 | 13.61 |
| 1983 | 139.7 | 2.4 | 137.3 | 4.6 | 2.6 | 144.5 | 16.8 | 5.2 | 122.5 | 13.58 |
| 1984 | 135.4 | 2.9 | 132.5 | 5.2 | 2.7 | 140.5 | 8.6 | 4.9 | 126.9 | 13.46 |
| 1985 | 143.1 | 2.5 | 140.7 | 4.9 | 2.8 | 148.4 | 13.2 | 4.6 | 130.6 | 12.75 |
| 1986 | 143.4 | 2.4 | 141.0 | 4.6 | 2.7 | 148.3 | 10.6 | 4.2 | 133.5 | 12.51 |
| 1987 | 142.5 | 2.2 | 140.3 | 4.2 | 2.5 | 146.9 | 6.7 | 4.6 | 135.6 | 12.54 |
| 1988 | 145.5 | 2.2 | 143.3 | 4.6 | 2.4 | 150.3 | 8.9 | 4.3 | 137.1 | 12.24 |
| 1989 F | 145.7 | 2.2 | 143.5 | 4.3 | 2.3 | 150.1 | 8.7 | 4.2 | 137.2 | 13.20 |

^{1/} Milkfat basis. Totals may not add because of rounding. ^{2/} Delivered to plants & dealers; does not reflect deductions. F = forecast.

Information contact: Jim Miller (202) 786-1770.

Table 13.—Poultry & Eggs

| | Annual | | | 1988 | | 1989 | | | | | |
|---|----------|----------|----------|---------|---------|---------|---------|---------|---------|---------|--|
| | 1986 | 1987 | 1988 | July | Feb | Mar | Apr | May | June | July | |
| Broilers | | | | | | | | | | | |
| Federally inspected slaughter, certified (mil. lb.) | 14,265.6 | 15,502.5 | 15,984.0 | 1,234.1 | 1,270.1 | 1,473.4 | 1,335.9 | 1,538.5 | 1,514.5 | 1,360.1 | |
| Wholesale price, 12-city (cts./lb.) | 56.9 | 47.4 | 56.3 | 66.5 | 58.1 | 62.1 | 63.5 | 70.4 | 67.4 | 62.0 | |
| Price of grower feed (\$/ton) | 187 | 186 | 220 | 24.4 | 24.3 | 24.2 | 24.0 | 23.8 | 23.7 | 23.7 | |
| Broiler-feed price ratio 1/ | 3.7 | 3.7 | 3.1 | 3.4 | 2.9 | 3.2 | 3.2 | 3.8 | 3.6 | 3.3 | |
| Stocks beginning of period (mil. lb.) | 26.6 | 23.9 | 24.8 | 41.2 | 32.8 | 32.5 | 32.4 | 37.9 | 35.3 | 33.8 | |
| Broiler-type chicks hatched (mil.) 2/ | 5,013.3 | 5,379.2 | 5,588.7 | 473.4 | 442.8 | 502.5 | 493.5 | 522.9 | 509.8 | 511.7 | |
| Turkeys | | | | | | | | | | | |
| Federally inspected slaughter, certified (mil. lb.) | 3,133 | 3,717 | 3,903 | 322.4 | 248.1 | 301.3 | 268.8 | 356.9 | 388.6 | 359.6 | |
| Wholesale price, Eastern U.S., 8-16 lb. young hens (cts./lb.) | 72.2 | 57.8 | 61.3 | 70.8 | 62.2 | 65.7 | 68.3 | 72.1 | 73.0 | 66.4 | |
| Price of turkey grower feed (\$/ton) | 215 | 213 | 243 | 279 | 264 | 258 | 256 | 255 | 251 | 251 | |
| Turkey-feed price ratio 1/ | 4.1 | 3.9 | 3.0 | 3.0 | 2.9 | 3.1 | 3.3 | 3.4 | 3.5 | 3.3 | |
| Stocks beginning of period (mil. lb.) | 150.2 | 178.2 | 282.4 | 456.8 | 262.5 | 263.1 | 269.2 | 298.5 | 355.6 | 454.6 | |
| Poultz placed in U.S. (mil.) | 225.4 | 240.4 | 242.0 | 23.7 | 23.7 | 26.9 | 26.4 | 28.6 | 29.1 | 26.5 | |
| Eggs | | | | | | | | | | | |
| Farm production (mil.) | 68,460 | 69,627 | 69,253 | 5,721 | 5,173 | 5,777 | 5,565 | 5,683 | 5,479 | 5,625 | |
| Average number of layers (mil.) | 278 | 280 | 286 | 270 | 272 | 270 | 267 | 267 | 266 | 265 | |
| Rate of lay (eggs per layer on farms) | 248 | 248 | 251 | 21.2 | 19.0 | 21.4 | 20.7 | 21.3 | 20.6 | 21.2 | |
| Cartoned price, New York, grade A large (cts./doz.) 3/ | 71.1 | 61.6 | 62.1 | 73.7 | 71.1 | 92.1 | 76.6 | 73.7 | 75.2 | 76.5 | |
| Price of laying feed (\$/ton) | 174 | 170 | 202 | 238 | 214 | 214 | 211 | 210 | 211 | 210 | |
| Egg-feed price ratio 1/ | 7.0 | 7.6 | 5.3 | 4.9 | 5.8 | 7.5 | 6.2 | 5.9 | 6.0 | 6.1 | |
| Stocks, first of month | | | | | | | | | | | |
| Shell (mil. doz.) | .72 | 1.16 | 1.29 | .90 | .36 | .21 | .48 | .54 | .78 | .81 | |
| Frozen (mil. doz.) | 10.0 | 9.8 | 13.1 | 19.2 | 14.9 | 14.4 | 11.2 | 11.7 | 12.3 | 11.4 | |
| Replacement chicks hatched (mil.) | 424 | 428 | 366 | 24.9 | 27.2 | 32.7 | 35.9 | 38.3 | 34.7 | 30.2 | |

^{1/} Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. ^{2/} Placement of broiler chicks is currently reported for 12 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. ^{3/} Price of cartoned eggs to volume buyers for delivery to retailers.

Information contact: Maxine Davis (202) 786-1714.

Table 14.—Dairy

| | Annual | | | 1988 | | 1989 | | | | |
|--|----------|---------|---------|----------|----------|----------|----------|----------|----------|----------|
| | 1986 | 1987 | 1988 | July | Feb | Mar | Apr | May | June | July |
| Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/ | 11.30 | 11.23 | 11.03 | 10.52 | 11.26 | 10.98 | 11.09 | 11.12 | 11.33 | 11.76 |
| Wholesale prices | | | | | | | | | | |
| Butter, grade A Chi. (cts./lb.) | 144.5 | 140.2 | 132.5 | 135.9 | 131.0 | 131.0 | 131.0 | 131.0 | 131.0 | 130.3 |
| Am. cheese, Wis. assembly pt. (cts./lb.) | 127.3 | 123.2 | 123.8 | 118.3 | 117.6 | 117.8 | 120.4 | 123.9 | 130.8 | 140.6 |
| Nonfat dry milk (cts./lb.) 2/ | 80.6 | 79.3 | 80.2 | 77.1 | 83.6 | 79.6 | 81.1 | 84.5 | 88.5 | 96.2 |
| USDA net removals | | | | | | | | | | |
| Total milk equiv. (mil. lb.) 3/ | 10,628.1 | 6,706.0 | 8,856.2 | 248.8 | 1,471.6 | 1,156.5 | 1,398.8 | 1,468.3 | 863.5 | 167.1 |
| Butter (mil. lb.) | 287.6 | 187.3 | 312.6 | 5.2 | 67.0 | 54.4 | 64.1 | 66.4 | 40.3 | 7.7 |
| Am. cheese (mil. lb.) | 468.4 | 282.0 | 238.1 | 13.6 | 8.5 | 3.0 | 7.0 | 9.3 | 2.9 | .2 |
| Nonfat dry milk (mil. lb.) | 827.3 | 559.4 | 267.5 | .7 | 0 | 0 | 0 | 0 | 0 | 0 |
| Milk | | | | | | | | | | |
| Milk prod. 21 States (mil. lb.) | 121,433 | 121,294 | 123,896 | 10,514 | 9,839 | 10,860 | 10,770 | 11,095 | 10,435 | 10,310 |
| Milk per cow (lb.) | 13,399 | 13,955 | 14,378 | 1,222 | 1,152 | 1,275 | 1,266 | 1,305 | 1,228 | 1,213 |
| Number of milk cows (1,000) | 9,063 | 8,692 | 8,617 | 8,601 | 8,538 | 8,520 | 8,510 | 8,505 | 8,501 | 8,497 |
| U.S. milk production (mil. lb.) | 143,381 | 142,557 | 145,527 | 6/12,312 | 6/11,566 | 6/12,766 | 6/12,656 | 6/13,037 | 6/12,275 | 6/12,074 |
| Stock, beginning | | | | | | | | | | |
| Total (mil. lb.) | 13,695 | 12,867 | 7,440 | 11,112 | 8,927 | 10,448 | 11,000 | 11,870 | 13,245 | 13,937 |
| Commercial (mil. lb.) | 4,590 | 4,165 | 4,646 | 5,324 | 4,673 | 5,018 | 4,940 | 5,140 | 5,763 | 5,888 |
| Government (mil. lb.) | 9,105 | 8,702 | 2,794 | 5,788 | 4,254 | 5,430 | 6,059 | 6,729 | 7,482 | 8,048 |
| Imports, total (mil. lb.) 3/ | 2,733 | 2,490 | 2,394 | 208 | 169 | 178 | 177 | 162 | 179 | -- |
| Commercial disappearance (mil. lb.) | 133,498 | 135,657 | 137,187 | 12,035 | 9,747 | 11,677 | 11,051 | 10,919 | 11,282 | -- |
| Butter | | | | | | | | | | |
| Production (mil. lb.) | 1,202.4 | 1,104.1 | 1,207.5 | 76.3 | 124.7 | 135.7 | 124.7 | 122.5 | 95.3 | 72.2 |
| Stocks, beginning (mil. lb.) | 205.5 | 193.0 | 143.2 | 293.4 | 246.6 | 314.4 | 341.9 | 379.1 | 438.3 | 464.2 |
| Commercial disappearance (mil. lb.) | 922.9 | 902.5 | 909.8 | 71.4 | 47.8 | 86.9 | 55.6 | 35.3 | 53.4 | -- |
| American cheese | | | | | | | | | | |
| Production (mil. lb.) | 2,798.2 | 2,716.7 | 2,756.6 | 232.5 | 208.7 | 231.9 | 236.2 | 247.0 | 240.0 | 226.8 |
| Stocks, beginning (mil. lb.) | 850.2 | 697.1 | 370.4 | 412.5 | 288.4 | 293.5 | 284.6 | 288.7 | 311.8 | 317.4 |
| Commercial disappearance (mil. lb.) | 2,382.8 | 2,437.1 | 2,570.0 | 224.4 | 189.1 | 228.5 | 228.8 | 220.4 | 237.3 | -- |
| Other cheese | | | | | | | | | | |
| Production (mil. lb.) | 2,411.1 | 2,627.7 | 2,815.0 | 222.3 | 210.8 | 256.5 | 236.4 | 247.9 | 245.6 | 237.8 |
| Stocks, beginning (mil. lb.) | 94.1 | 92.0 | 89.7 | 99.0 | 111.4 | 111.4 | 110.9 | 117.0 | 115.8 | 120.4 |
| Commercial disappearance (mil. lb.) | 2,684.9 | 2,880.2 | 3,034.1 | 235.4 | 225.2 | 274.2 | 245.6 | 265.9 | 258.7 | -- |
| Nonfat dry milk | | | | | | | | | | |
| Production (mil. lb.) | 1,284.1 | 1,056.8 | 978.5 | 80.1 | 85.6 | 95.7 | 99.8 | 99.8 | 81.0 | 60.8 |
| Stocks, beginning (mil. lb.) | 1,011.1 | 686.8 | 177.2 | 160.4 | 66.3 | 84.4 | 88.3 | 100.8 | 100.7 | 78.3 |
| Commercial disappearance (mil. lb.) | 479.1 | 492.9 | 733.1 | 77.3 | 66.5 | 91.0 | 86.5 | 99.4 | 101.9 | -- |
| Frozen dessert | | | | | | | | | | |
| Production (mil. gal.) 4/ | 1,248.6 | 1,260.7 | 1,246.9 | 126.8 | 86.6 | 108.0 | 104.3 | 122.6 | 128.4 | 122.5 |
| | Annual | | | 1987 | 1988 | | | | 1989 | |
| | 1986 | 1987 | 1988 | IV | I | II | III | IV | I P | II P |
| Milk production (mil. lb.) | 143,381 | 142,557 | 145,527 | 34,811 | 36,197 | 37,871 | 36,025 | 35,434 | 36,647 | 38,044 |
| Milk per cow (lb.) | 13,260 | 13,802 | 14,213 | 3,385 | 3,519 | 3,697 | 3,526 | 3,471 | 3,611 | 3,763 |
| No. of milk cows (1,000) | 10,813 | 10,329 | 10,239 | 10,285 | 10,285 | 10,244 | 10,218 | 10,208 | 10,148 | 10,110 |
| Milk-feed price ratio 5/ | 1.73 | 1.83 | 1.58 | 1.89 | 1.74 | 1.51 | 1.46 | 1.59 | 1.56 | 1.47 |
| Returns over concentrate 5/ costs (\$/cwt milk) | 9.23 | 9.52 | 9.05 | 9.97 | 9.34 | 8.33 | 8.53 | 9.86 | 9.63 | 8.80 |

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area, high heat spray process.

3/ Milk equivalent, fat basis. 4/ Ice cream, ice milk, & hard sherbet. 5/ Based on average milk price after adjustment for price support deductions. 6/ Estimated. P = preliminary. -- = not available.

Information contact: Jim Miller (202) 786-1770.

Table 15.—Wool

| | Annual | | | 1988 | | 1989 | | | | |
|------------------------------------|---------|---------|---------|-------|--------|--------|--------|-------|--------|--------|
| | 1986 | 1987 | 1988 | July | Feb | Mar | Apr | May | June | July P |
| U.S. wool price, 1/ (cts./lb.) | 191 | 265 | 438 | 450 | 438 | 410 | 375 | 375 | 365 | 350 |
| Imported wool price, 2/ (cts./lb.) | 201 | 247 | 372 | 364 | 417 | 387 | 363 | 339 | 323 | 325 |
| U.S. mill consumption, scoured | | | | | | | | | | |
| Apparel wool (1,000 lb.) | 126,768 | 129,677 | 117,069 | 9,077 | 11,074 | 13,718 | 10,400 | 8,700 | 11,908 | 9,669 |
| Carpet wool (1,000 lb.) | 9,960 | 13,092 | 15,633 | 1,073 | 1,314 | 1,559 | 1,595 | 1,362 | 1,517 | 1,155 |

1/ Wool price delivered at U.S. mills, clean basis, Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" & up.

2/ Wool price, Charleston, SC warehouse, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents. P = preliminary.

Information contact: John Lawler (202) 786-1840.

Table 16.—Meat Animals

| | Annual | | | 1988 | 1989 | | | | | |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| | 1986 | 1987 | 1988 | July | Feb | Mar | Apr | May | June | July |
| Cattle on feed (7 States) | | | | | | | | | | |
| Number on feed (1,000 head) 1/ | 7,920 | 7,643 | 8,066 | 7,431 | 7,700 | 7,661 | 8,012 | 7,847 | 7,555 | 7,010 |
| Placed on feed (1,000 head) | 20,035 | 21,040 | 20,584 | 1,246 | 1,585 | 1,975 | 1,534 | 1,619 | 1,268 | 1,311 |
| Marketings (1,000 head) | 19,263 | 19,410 | 19,698 | 1,760 | 1,509 | 1,549 | 1,570 | 1,747 | 1,751 | 1,690 |
| Other disappearance (1,000 head) | 1,049 | 1,207 | 1,187 | 62 | 115 | 75 | 129 | 164 | 62 | 63 |
| Beef steer-corn price ratio, | | | | | | | | | | |
| Omaha 2/ | 31.0 | 41.0 | 31.5 | 24.5 | 28.7 | 29.4 | 30.2 | 29.4 | 28.9 | 29.6 |
| Hog-corn price ratio, Omaha 2/ | 27.8 | 32.8 | 19.6 | 16.8 | 16.3 | 15.4 | 14.8 | 16.8 | 18.5 | 19.6 |
| Market prices (\$/cwt) | | | | | | | | | | |
| Slaughter cattle | | | | | | | | | | |
| Choice steers, Omaha | 57.75 | 64.60 | 69.54 | 65.96 | 72.92 | 75.75 | 75.31 | 74.52 | 71.71 | 70.74 |
| Utility cows, Omaha | 37.19 | 44.83 | 46.55 | 45.39 | 46.92 | 45.89 | 45.19 | 45.57 | 48.56 | 49.12 |
| Choice vealers, S. St. Paul-3/ | 59.92 | 78.74 | 90.23 | 77.50 | 225.06 | 257.50 | 266.25 | 260.05 | 258.44 | 246.88 |
| Feeder cattle | | | | | | | | | | |
| Choice, Kansas City, 600-700 lb. | 62.79 | 75.36 | 83.67 | 79.08 | 85.56 | 84.45 | 82.63 | 83.50 | 85.38 | 87.13 |
| Slaughter hogs | | | | | | | | | | |
| Barrows & gilts, 7-markets | 51.19 | 51.69 | 43.39 | 45.57 | 40.91 | 39.85 | 37.06 | 42.37 | 46.10 | 47.06 |
| Feeder pigs | | | | | | | | | | |
| S. Mo. 40-50 lb. (per head) | 45.62 | 46.69 | 38.88 | 25.57 | 34.18 | 39.55 | 34.74 | 34.24 | 28.85 | 24.25 |
| Slaughter sheep & lambs | | | | | | | | | | |
| Lambs, Choice, San Angelo | 69.46 | 78.09 | 68.84 | 59.00 | 68.83 | 70.90 | 78.17 | 73.56 | 72.63 | 69.50 |
| Ewes, Good, San Angelo | 34.78 | 38.62 | 38.88 | 37.83 | 53.28 | 47.55 | 42.45 | 38.95 | 37.10 | 31.92 |
| Feeder lambs | | | | | | | | | | |
| Choice, San Angelo | 73.14 | 102.26 | 90.91 | 79.67 | 97.17 | 95.30 | 88.06 | 78.18 | 75.94 | 74.08 |
| Wholesale meat prices, Midwest | | | | | | | | | | |
| Choice steer beef, 600-700 lb. | 88.98 | 97.21 | 103.34 | 97.09 | 107.98 | 112.43 | 113.84 | 112.62 | 106.35 | 104.91 |
| Canner & cutter cow beef | 71.31 | 83.70 | 87.77 | 85.74 | 96.93 | 92.17 | 89.77 | 89.74 | 93.83 | 95.24 |
| Pork loins, 14-18 lb. 4/ | 104.78 | 106.23 | 97.49 | 104.96 | 90.97 | 91.77 | 91.59 | 99.95 | 108.28 | 115.10 |
| Pork bellies, 12-14 lb. | 65.82 | 63.11 | 41.25 | 40.84 | 31.41 | 30.91 | 25.49 | 29.11 | 32.90 | 31.52 |
| Hams, skinned, 14-17 lb. | 80.01 | 80.96 | 71.03 | 65.90 | 67.11 | 63.00 | 61.60 | 63.30 | 64.00 | 64.23 |
| All fresh beef retail price 5/ | -- | 212.64 | 224.35 | 226.07 | 233.94 | 238.50 | 237.33 | 238.31 | 236.47 | 237.50. |
| Commercial slaughter (1,000 head)* | | | | | | | | | | |
| Cattle | 37,288 | 35,647 | 35,072 | 2,983 | 2,568 | 2,822 | 2,644 | 3,024 | 3,025 | 2,794 |
| Steers | 17,516 | 17,443 | 17,341 | 1,494 | 1,261 | 1,400 | 1,336 | 1,521 | 1,506 | 1,385 |
| Heifers | 11,097 | 10,906 | 10,755 | 927 | 808 | 840 | 763 | 907 | 952 | 903 |
| Cows | 7,961 | 6,610 | 6,334 | 512 | 457 | 532 | 493 | 540 | 508 | 452 |
| Bulls & stags | 714 | 689 | 642 | 49 | 42 | 50 | 52 | 56 | 59 | 54 |
| Calves | 3,408 | 2,815 | 2,504 | 215 | 181 | 200 | 158 | 163 | 167 | 174 |
| Sheep & lambs | 5,635 | 5,199 | 5,293 | 405 | 425 | 519 | 409 | 447 | 437 | 413 |
| Hogs | 79,598 | 81,081 | 87,738 | 6,366 | 6,791 | 7,763 | 7,380 | 7,480 | 7,079 | 6,295 |
| Commercial production (mil. lb.) | | | | | | | | | | |
| Beef | 24,213 | 23,405 | 23,419 | 1,982 | 1,744 | 1,889 | 1,757 | 1,998 | 2,022 | 1,889 |
| Veal | 509 | 416 | 387 | 34 | 28 | 31 | 27 | 29 | 29 | 27 |
| Lamb & mutton | 331 | 309 | 329 | 27 | 27 | 33 | 26 | 28 | 26 | 25 |
| Pork | 13,998 | 14,312 | 15,614 | 1,133 | 1,204 | 1,373 | 1,321 | 1,341 | 1,266 | 1,107 |
| | Annual | | | 1988 | | | | 1989 | | |
| | 1986 | 1987 | 1988 | I | II | III | IV | I | II | III |
| Cattle on feed (13 States) | | | | | | | | | | |
| Number on feed (1,000 head) 1/ | 9,754 | 9,245 | 9,769 | 9,769 | 9,385 | 9,001 | 8,591 | 9,408 | 9,678 | 8,455 |
| Placed on feed (1,000 head) | 23,583 | 24,894 | 24,353 | 5,824 | 5,893 | 5,986 | 6,650 | 6,212 | 5,177 | -- |
| Marketings (1,000 head) | 22,856 | 22,991 | 23,339 | 5,823 | 5,859 | 6,171 | 5,486 | 5,598 | 5,985 | 7/6,038 |
| Other disappearance (1,000 head) | 1,236 | 1,379 | 1,375 | 385 | 418 | 225 | 347 | 344 | 415 | -- |
| Hogs & pigs (10 States) 6/ | | | | | | | | | | |
| Inventory (1,000 head) 1/ | 41,100 | 39,690 | 42,995 | 42,995 | 41,345 | 44,065 | 45,000 | 43,210 | 41,605 | 43,690 |
| Breeding (1,000 head) 1/ | 5,258 | 5,110 | 5,510 | 5,510 | 5,520 | 5,630 | 5,460 | 5,335 | 5,420 | 5,560 |
| Market (1,000 head) 1/ | 35,842 | 34,580 | 37,485 | 37,485 | 35,825 | 38,435 | 39,540 | 37,875 | 36,185 | 38,130 |
| Farrowings (1,000 head) | 8,223 | 8,838 | 9,316 | 2,123 | 2,578 | 2,359 | 2,261 | 2,109 | 2,535 | 7/2,359 |
| Pig crop (1,000 head) | 63,835 | 68,888 | 71,848 | 16,489 | 20,175 | 18,007 | 17,216 | 16,439 | 19,900 | -- |

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Per head starting September 1988. 4/ Prior to 1984, 8-14 lb.; 1984 & 1985, 14-17 lb.; beginning 1986, 14-18 lb. 5/ New series estimating the composite price of all beef grades & ground beef sold by retail stores. This new series is in addition to, but does not replace, the series for the retail price of Choice beef that appears in table 8. 6/ Quarters are Dec. of preceding year-Feb. (I), Mar.-May (II), June-Aug. (III), and Sept.-Nov. (IV). 7/ Intentions. *Classes estimated. -- = not available.

Information contacts: Ron Gustafson or Leland Southard (202) 786-1285.

Crops & Products

Table 17.—Supply & Utilization^{1,2}

| | Area | | | | | | Feed and residual | Other domestic use | Exports | Total use | Ending stocks | Farm price |
|--------------|--------------|---------|-----------|-------|------------|-----------------|-------------------|-------------------------|---------|-----------|---------------|-------------|
| | Set aside 3/ | Planted | Harvested | Yield | Production | Total supply 4/ | | | | | | 5/ |
| | Mil. acres | | Bu./acre | | | | | Mil. bu. | | | | \$/bu. |
| Wheat | | | | | | | | | | | | |
| 1984/85 | 18.3 | 79.2 | 66.9 | 38.8 | 2,595 | 4,003 | 405 | 749 | 1,424 | 2,578 | 1,425 | 3.39 |
| 1985/86 | 18.8 | 75.6 | 64.7 | 37.5 | 2,425 | 3,866 | 279 | 767 | 915 | 1,961 | 1,905 | 3.08 |
| 1986/87 | 21.0 | 72.1 | 60.7 | 36.4 | 2,092 | 4,018 | 413 | 780 | 1,004 | 2,197 | 1,821 | 2.42 |
| 1987/88 | 23.9 | 65.8 | 56.0 | 37.7 | 2,107 | 3,945 | 281 | 811 | 1,592 | 2,684 | 1,261 | 2.57 |
| 1988/89* | 22.5 | 65.5 | 53.2 | 34.1 | 1,811 | 3,096 | 155 | 823 | 1,425 | 2,403 | 694 | 3.72 |
| 1989/90* | 9.5 | 76.8 | 62.7 | 32.9 | 2,064 | 2,779 | 175 | 835 | 1,275 | 2,285 | 494 | 3.85-4.20 |
| Rice | | | | | | | | | | | | |
| | Mil. acres | | Lb./acre | | | | | Mil. cwt (rough equiv.) | | | | \$/cwt |
| 1984/85 | .79 | 2.83 | 2.80 | 4,954 | 138.8 | 187.3 | -- | 6/60.5 | 62.1 | 122.6 | 64.7 | 8.04 |
| 1985/86 | 1.24 | 2.51 | 2.49 | 5,414 | 134.9 | 201.8 | -- | 6/65.8 | 58.7 | 124.5 | 77.3 | 6.53 |
| 1986/87 | 1.48 | 2.38 | 2.36 | 5,651 | 133.4 | 213.3 | -- | 6/77.7 | 84.2 | 161.9 | 51.4 | 3.75 |
| 1987/88 | 1.57 | 2.36 | 2.33 | 5,555 | 129.6 | 184.0 | -- | 6/80.4 | 72.2 | 152.6 | 31.4 | 7.27 |
| 1988/89* | 1.09 | 2.93 | 2.90 | 5,511 | 159.5 | 194.9 | -- | 6/81.0 | 87.0 | 168.0 | 26.9 | 6.50-7.00 |
| 1989/90* | 1.16 | 2.77 | 2.75 | 5,548 | 152.3 | 184.3 | -- | 6/84.1 | 78.0 | 162.1 | 22.2 | 7.00-9.00 |
| Corn | | | | | | | | | | | | |
| | Mil. acres | | Bu./acre | | | | | Mil. bu. | | | | \$/bu. |
| 1984/85 | 3.9 | 80.5 | 71.9 | 106.7 | 7,674 | 8,684 | 4,079 | 1,091 | 1,865 | 7,036 | 1,648 | 2.63 |
| 1985/86 | 5.4 | 83.4 | 75.2 | 118.0 | 8,877 | 10,536 | 4,095 | 1,160 | 1,241 | 6,496 | 4,040 | 2.23 |
| 1986/87 | 14.3 | 76.7 | 69.2 | 119.3 | 8,250 | 12,291 | 4,714 | 1,192 | 1,504 | 7,410 | 4,882 | 1.50 |
| 1987/88 | 23.0 | 65.7 | 59.2 | 119.4 | 7,072 | 11,958 | 4,738 | 1,229 | 1,732 | 7,699 | 4,259 | 1.94 |
| 1988/89* | 20.5 | 67.6 | 58.2 | 84.6 | 4,921 | 9,185 | 4,000 | 1,255 | 2,075 | 7,330 | 1,855 | 2.55 |
| 1989/90* | 10.0 | 72.3 | 65.2 | 112.4 | 7,321 | 9,179 | 4,200 | 1,300 | 2,000 | 7,500 | 1,679 | 1.85-2.25 |
| Sorghum | | | | | | | | | | | | |
| | Mil. acres | | Bu./acre | | | | | Mil. bu. | | | | \$/bu. |
| 1984/85 | .6 | 17.3 | 15.4 | 56.4 | 866 | 1,154 | 539 | 18 | 297 | 854 | 300 | 2.32 |
| 1985/86 | .9 | 18.3 | 16.8 | 66.8 | 1,120 | 1,420 | 664 | 28 | 178 | 869 | 551 | 1.93 |
| 1986/87 | 3.0 | 15.3 | 13.9 | 67.7 | 938 | 1,489 | 535 | 12 | 198 | 746 | 743 | 1.37 |
| 1987/88 | 4.1 | 11.8 | 10.6 | 69.7 | 739 | 1,483 | 564 | 25 | 231 | 820 | 663 | 1.70 |
| 1988/89* | 3.9 | 10.4 | 9.1 | 63.8 | 578 | 1,240 | 475 | 25 | 315 | 815 | 425 | 2.30 |
| 1989/90* | 2.8 | 11.9 | 10.5 | 62.6 | 659 | 1,084 | 500 | 15 | 250 | 765 | 319 | 1.65-2.05 |
| Barley | | | | | | | | | | | | |
| | Mil. acres | | Bu./acre | | | | | Mil. bu. | | | | \$/bu. |
| 1984/85 | .5 | 12.0 | 11.2 | 53.4 | 599 | 799 | 304 | 170 | 77 | 551 | 247 | 2.29 |
| 1985/86 | .7 | 13.2 | 11.6 | 51.0 | 591 | 848 | 333 | 169 | 22 | 523 | 325 | 1.98 |
| 1986/87 | 2.1 | 13.1 | 12.0 | 50.8 | 611 | 944 | 298 | 174 | 137 | 608 | 336 | 1.61 |
| 1987/88 | 2.9 | 11.0 | 10.1 | 52.7 | 530 | 879 | 258 | 174 | 126 | 558 | 321 | 1.81 |
| 1988/89* | 2.5 | 9.7 | 7.5 | 38.6 | 291 | 624 | 162 | 180 | 85 | 427 | 197 | 2.79 |
| 1989/90* | 2.1 | 9.3 | 8.6 | 46.9 | 401 | 613 | 190 | 180 | 60 | 430 | 183 | 2.05-2.45 |
| Oats | | | | | | | | | | | | |
| | Mil. acres | | Bu./acre | | | | | Mil. bu. | | | | \$/bu. |
| 1984/85 | .1 | 12.4 | 8.2 | 58.0 | 474 | 689 | 433 | 74 | 1 | 509 | 180 | 1.67 |
| 1985/86 | .1 | 13.3 | 8.2 | 63.7 | 521 | 728 | 460 | 82 | 2 | 544 | 184 | 1.23 |
| 1986/87 | .6 | 14.7 | 6.9 | 56.3 | 386 | 603 | 395 | 73 | 3 | 471 | 133 | 1.21 |
| 1987/88 | .8 | 18.0 | 6.9 | 54.0 | 374 | 553 | 361 | 79 | 1 | 441 | 112 | 1.56 |
| 1988/89* | .3 | 13.9 | 5.6 | 39.1 | 219 | 399 | 200 | 100 | 1 | 301 | 98 | 2.61 |
| 1989/90* | .3 | 12.1 | 7.3 | 52.3 | 381 | 529 | 300 | 110 | 2 | 412 | 117 | 1.45-1.85 |
| Soybeans | | | | | | | | | | | | |
| | Mil. acres | | Bu./acre | | | | | Mil. bu. | | | | \$/bu. |
| 1984/85 | 0 | 67.8 | 66.1 | 28.1 | 1,861 | 2,037 | 7/93 | 1,030 | 598 | 1,721 | 316 | 5.84 |
| 1985/86 | 0 | 63.1 | 61.6 | 34.1 | 2,099 | 2,415 | 7/86 | 1,053 | 740 | 1,879 | 536 | 5.05 |
| 1986/87 | 0 | 60.4 | 58.3 | 33.3 | 1,940 | 2,476 | 7/104 | 1,179 | 757 | 2,040 | 436 | 4.78 |
| 1987/88 | 0 | 58.0 | 57.0 | 33.7 | 1,923 | 2,359 | 7/81 | 1,174 | 802 | 2,057 | 302 | 5.88 |
| 1988/89* | 0 | 58.9 | 57.4 | 26.8 | 1,539 | 1,841 | 7/96 | 1,060 | 530 | 1,686 | 155 | 7.35 |
| 1989/90* | 0 | 60.5 | 59.1 | 32.0 | 1,889 | 2,044 | 7/94 | 1,100 | 575 | 1,769 | 275 | 4.75-6.25 |
| Soybean oil | | | | | | | | | | | | |
| | | | | | | | | Mil. lbs. | | | | 8/ Cts./lb. |
| 1984/85 | -- | -- | -- | -- | 11,468 | 12,209 | -- | 9,917 | 1,660 | 11,577 | 632 | 29.50 |
| 1985/86 | -- | -- | -- | -- | 11,617 | 12,257 | -- | 10,053 | 1,257 | 11,310 | 947 | 18.00 |
| 1986/87 | -- | -- | -- | -- | 12,783 | 13,745 | -- | 10,833 | 1,187 | 12,020 | 1,725 | 15.40 |
| 1987/88 | -- | -- | -- | -- | 9/ 12,974 | 14,895 | -- | 10,930 | 1,873 | 12,803 | 2,092 | 22.65 |
| 1988/89* | -- | -- | -- | -- | 9/ 11,753 | 13,995 | -- | 10,450 | 1,425 | 11,875 | 2,120 | 21.00 |
| 1989/90* | -- | -- | -- | -- | 12,210 | 14,360 | -- | 11,000 | 1,400 | 12,400 | 1,960 | 18.0-22.0 |
| Soybean meal | | | | | | | | | | | | |
| | | | | | | | | 1,000 tons | | | | 10/ \$/ton |
| 1984/85 | -- | -- | -- | -- | 24,529 | 24,784 | -- | 19,480 | 4,917 | 24,397 | 387 | 125 |
| 1985/86 | -- | -- | -- | -- | 24,951 | 25,338 | -- | 19,090 | 6,036 | 25,126 | 212 | 155 |
| 1986/87 | -- | -- | -- | -- | 27,758 | 27,970 | -- | 20,387 | 7,343 | 27,730 | 240 | 163 |
| 1987/88 | -- | -- | -- | -- | 28,060 | 28,300 | -- | 21,293 | 6,854 | 28,147 | 153 | 222 |
| 1988/89* | -- | -- | -- | -- | 24,997 | 25,150 | -- | 19,750 | 5,100 | 24,850 | 300 | 233 |
| 1989/90* | -- | -- | -- | -- | 26,100 | 26,400 | -- | 21,000 | 5,100 | 26,100 | 300 | 155-185 |

See footnotes at end of table.

Table 17.—Supply & Utilization, continued

| | Area | | | Yield | Production | Total supply 4/ | Feed and residual | Other domestic use | Exports | Total use | Ending stocks | Farm price 5/ |
|------------|--------------------|---------|-----------|----------|------------|--------------------|----------------------|-----------------------|---------|-----------|------------------|---------------------|
| | Set aside 3/ | Planted | Harvested | | | | | | | | | |
| | Mil. acres | | | Lb./acre | | | | Mil. bales | | | | Cts./lb. |
| Cotton 11/ | | | | | | | | | | | | |
| 1984/85 | 2.5 | 11.1 | 10.4 | 600 | 13.0 | 15.8 | -- | 5.5 | 6.2 | 11.8 | 4.1 | 58.70 |
| 1985/86 | 3.6 | 10.7 | 10.2 | 630 | 13.4 | 17.6 | -- | 6.4 | 2.0 | 8.4 | 9.4 | 56.50 |
| 1986/87 | 4.2 | 10.0 | 8.5 | 552 | 9.7 | 19.1 | -- | 7.4 | 6.7 | 14.1 | 5.0 | 52.40 |
| 1987/88 | 4.0 | 10.4 | 10.0 | 706 | 14.8 | 19.8 | -- | 7.6 | 6.6 | 14.2 | 5.8 | 64.30 |
| 1988/89* | 2.2 | 12.5 | 11.9 | 619 | 15.4 | 21.2 | -- | 7.6 | 6.3 | 13.8 | 7.1 | 55.50 |
| 1989/90* | 3.5 | 10.5 | 9.5 | 618 | 12.3 | 19.4 | -- | 7.7 | 7.8 | 15.5 | 3.9 | -- |

*September 12, 1989 Supply and Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, & oats, August 1 for cotton & rice, September 1 for soybeans, corn, & sorghum, October 1 for soybean & soybean meal. 2/ Conversion factors: Hectare (ha.) = 2.471 acres, 1 metric ton = 2,204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt of rice, and 4.59 480-pound bales of cotton. 3/ Includes diversion, PIK, acreage reduction, 50-92, & 0-92 programs. 4/ Includes imports. 5/ Market average prices do not include an allowance for loans outstanding & government purchases. 6/ Residual included in domestic use. 7/ Includes seed. 8/ Average of crude soybean oil, Decatur. 9/ Includes 196 million pounds in imports for 1987/88 & 300 million in 1988/89. 10/ Average of 44 percent, Decatur. 11/ Upland & extra long staple. Stock estimates based on Census Bureau data, resulting in an unaccounted difference between supply & use estimates & changes in ending stocks. -- = not available.

Information contact: Commodity Economics Division, Crops Branch (202) 786-1840.

Table 18.—Food Grains

| | Marketing year 1/ | | | | 1988 | 1989 | | | | |
|--|-------------------|---------|---------|---------|-------|-------|-------|-------|-------|-------|
| | 1984/85 | 1985/86 | 1986/87 | 1987/88 | July | Mar | Apr | May | June | July |
| Wholesale prices | | | | | | | | | | |
| Wheat, No. 1 HRW, Kansas City (\$/bu.) 2/ | 3.74 | 3.28 | 2.72 | 2.96 | 3.77 | 4.32 | 4.46 | 4.55 | 4.41 | 4.28 |
| Wheat, DNS, Minneapolis (\$/bu.) 2/ | 3.70 | 3.25 | 2.62 | 2.92 | 3.96 | 4.46 | 4.45 | 4.50 | 4.29 | 4.21 |
| Rice, S.W. La. (\$/cwt) 3/ | 17.98 | 16.11 | 10.25 | 19.25 | 17.90 | 13.80 | 13.50 | 15.40 | 15.50 | 15.60 |
| Wheat | | | | | | | | | | |
| Exports (mil. bu.) | 1,424 | 915 | 1,004 | 1,592 | 120 | 149 | 122 | 97 | 92 | -- |
| Mill grind (mil. bu.) | 676 | 703 | 755 | 753 | 63 | 59 | 59 | 63 | 59 | -- |
| Wheat flour production (mil. cwt) | 301 | 314 | 335 | 336 | 28 | 26 | 27 | 28 | 26 | -- |
| Rice | | | | | | | | | | |
| Exports (mil. cwt, rough equiv.) | 62.1 | 58.7 | 84.2 | 72.2 | 5.3 | 10.0 | 6.5 | 11.6 | 5.0 | 4.0 |

| | Marketing year 1/ | | | 1987 | 1988 | | | 1989 | | |
|-------------------------------------|-------------------|---------|---------|----------|---------|---------|---------|----------|---------|---------|
| | 1985/86 | 1986/87 | 1987/88 | Sept-Nov | Dec-Feb | Mar-May | Jun-Aug | Sept-Nov | Dec-Feb | Mar-May |
| Wheat | | | | | | | | | | |
| Stocks, beginning (mil. bu.) | 1,425 | 1,905 | 1,821 | 2,976.5 | 2,500.6 | 1,923.5 | 1,260.8 | 2,253.6 | 1,709.9 | 1,221.7 |
| Domestic use | | | | | | | | | | |
| Food (mil. bu.) | 674 | 696 | 726 | 193.1 | 170.8 | 181.6 | 181.4 | 196.4 | 172.9 | 168.8 |
| Seed, feed & residual (mil. bu.) 4/ | 372 | 497 | 366 | -20.1 | -4.2 | 24.0 | 282.4 | 23.6 | -43.0 | -4.0 |
| Exports (mil. bu.) | 915 | 1,004 | 1,592 | 308.5 | 413.1 | 460.6 | 363.4 | 330.1 | 363.0 | 368.1 |

1/ Beginning June 1 for wheat & August 1 for rice. 2/ Ordinary protein. 3/ Long grain, milled basis. 4/ Residual includes feed use. -- = not available.

Information contacts: Ed Allen & Janet Livezey (202) 786-1840.

Table 19.—Cotton

| | Marketing year 1/ | | | | 1988 | 1989 | | | | |
|---|-------------------|---------|---------|---------|-------|--------|--------|--------|-------|-------|
| | 1984/85 | 1985/86 | 1986/87 | 1987/88 | July | Mar | Apr | May | June | July |
| U.S. price, SLM, 1-1/16 in. (cts./lb.) 2/ | 60.5 | 60.0 | 53.2 | 63.1 | 57.1 | 57.6 | 61.4 | 63.7 | 64.1 | 67.5 |
| Northern Europe prices Index (cts./lb.) 3/ | 69.2 | 48.9 | 62.0 | 72.7 | 61.5 | 66.0 | 73.8 | 77.3 | 78.8 | 83.0 |
| U.S. M 1-3/32 in. (cts./lb.) 4/ | 73.9 | 64.8 | 61.8 | 76.3 | 68.2 | 70.0 | 74.1 | 76.9 | 77.9 | 77.2 |
| U.S. mill consumpt. (1,000 bales) | 5,545 | 6,399 | 7,452 | 7,617 | 477 | 706 | 636 | 755 | 716 | 534 |
| Exports (thou bales) | 6,201 | 1,969 | 6,684 | 6,582 | 320 | 629 | 627 | 682 | 568 | 668 |
| Stocks, beginning (1,000 bales) | 2,775 | 4,102 | 9,348 | 5,026 | 5,771 | 13,947 | 12,613 | 11,350 | 9,913 | 8,651 |

1/ Beginning August 1. 2/ Average spot market. 3/ Liverpool Outlook (A) index; average of five lowest priced of 11 selected growths. 4/ Memphis territory growths.

Information contact: Bob Skinner (202) 786-1840.

Table 20.—Feed Grains

| | Marketing year 1/ | | | | 1988 | 1989 | | | | |
|---|-------------------|---------|---------|---------|---------|---------|----------|---------|---------|----------|
| | 1984/85 | 1985/86 | 1986/87 | 1987/88 | July | Mar | Apr | May | June | July |
| Wholesale prices | | | | | | | | | | |
| Corn, no. 2 yellow, Chicago (\$/bu.) | 2.79 | 2.35 | 1.64 | 2.14 | 2.93 | 2.78 | 2.72 | 2.77 | 2.66 | 2.50 |
| Sorghum, no. 2 yellow, Kansas City (\$/cwt) | 4.46 | 3.72 | 2.73 | 3.40 | 4.79 | 4.32 | 4.17 | 4.29 | 4.15 | 3.96 |
| Barley, feed, Duluth (\$/bu.) 2/ | 2.09 | 1.53 | 1.44 | 1.78 | 2.31 | 2.49 | 2.52 | 2.41 | 2.12 | 2.22 |
| Barley, malting, Minneapolis (\$/bu.) | 2.55 | 2.24 | 1.89 | 2.04 | 3.87 | 4.33 | 4.29 | 3.84 | 3.02 | 3.33 |
| Exports 3/ | | | | | | | | | | |
| Corn (mil. bu.) | 1,865 | 1,241 | 1,504 | 1,735 | 126.5 | 206.6 | 180.9 | 212.8 | 225.4 | -- |
| Feed grains (mil. metric tons) 4/ | 56.6 | 36.6 | 46.3 | 52.9 | 4.0 | 6.0 | 5.5 | 6.1 | 6.5 | -- |
| | Marketing year 1/ | | | | 1988 | 1989 | | | | |
| | 1984/85 | 1985/86 | 1986/87 | 1987/88 | Mar-May | Jun-Aug | Sept-Nov | Dec-Feb | Mar-May | June-Aug |
| Corn | | | | | | | | | | |
| Stocks, beginning (mil. bu.) | 1,006 | 1,648 | 4,040 | 4,882 | 7,635 | 5,836 | 4,259 | 7,072 | 5,204 | 3,419 |
| Domestic use | | | | | | | | | | |
| Feed (mil. bu.) | 4,079 | 4,095 | 4,714 | 4,746 | 960 | 839 | 1,338 | 1,077 | 848 | -- |
| Food, seed, ind. (mil. bu.) | 1,091 | 1,160 | 1,192 | 1,224 | 315 | 323 | 294 | 284 | 339 | -- |
| Exports (mil. bu.) | 1,865 | 1,241 | 1,504 | 1,720 | 514 | 414 | 482 | 510 | 600 | -- |
| Total use (mil. bu.) | 7,036 | 6,496 | 7,410 | 7,690 | 1,804 | 1,577 | 2,109 | 1,869 | 1,787 | -- |

1/ September 1 for corn & sorghum; June 1 for oats & barley. 2/ Beginning March 1987 reporting point changed from Minneapolis to Duluth. 3/ Includes products. 4/ Aggregated data for corn, sorghum, oats, & barley. -- not available.

Information contact: Joy Harwood (202) 786-1840.

Table 21.—Fats & Oils

| | Marketing year * | | | | 1988 | 1989 | | | | |
|--|------------------|----------|----------|----------|---------|---------|---------|---------|---------|---------|
| | 1984/85 | 1985/86 | 1986/87 | 1987/88 | June | Feb | Mar | Apr | May | June |
| Soybeans | | | | | | | | | | |
| Wholesale price, no. 1 yellow, Chicago (\$/bu.) | 5.88 | 5.20 | 5.03 | 6.67 | 9.11 | 7.45 | 7.62 | 7.25 | 7.30 | 7.17 |
| Crushings (mil. bu.) | 1,030.5 | 1,052.8 | 1,178.8 | 1,174.5 | 89.2 | 85.8 | 93.5 | 89.6 | 87.0 | 76.0 |
| Exports (mil. bu.) | 598.2 | 740.7 | 756.9 | 801.6 | 29.3 | 56.8 | 67.9 | 41.4 | 23.6 | 31.6 |
| Stocks, beginning (mil. bu.) | 175.7 | 316.0 | 536.0 | 436.0 | 95.4 | 131.9 | 112.0 | 99.2 | 72.8 | 52.5 |
| Soybean oil | | | | | | | | | | |
| Wholesale price, crude, Decatur (cts./lb.) | 29.52 | 18.02 | 15.36 | 22.92 | 27.68 | 21.21 | 22.11 | 21.97 | 22.23 | 20.82 |
| Production (mil. lb.) | 11,467.9 | 11,617.3 | 12,783.1 | 12,974.5 | 996.4 | 952.3 | 1,041.2 | 1,004.0 | 977.4 | 856.1 |
| Domestic disap. (mil. lb.) | 9,888.5 | 10,045.9 | 10,820.2 | 10,734.1 | 936.8 | 687.2 | 937.8 | 1,032.9 | 826.6 | 844.2 |
| Exports (mil. lb.) | 1,659.9 | 1,257.3 | 1,184.5 | 1,873.2 | 269.0 | 65.8 | 112.4 | 105.5 | 161.4 | 72.1 |
| Stocks, beginning (mil. lb.) | 720.5 | 632.5 | 946.6 | 1,725.0 | 2,570.4 | 2,703.2 | 2,902.4 | 2,893.4 | 2,759.0 | 2,743.2 |
| Soybean meal | | | | | | | | | | |
| Wholesale price, 44% protein, Decatur (\$/ton) | 125.46 | 154.88 | 162.61 | 221.90 | 287.80 | 234.10 | 237.10 | 220.75 | 214.70 | 227.50 |
| Production (1,000 ton) | 24,529.3 | 24,951.3 | 27,758.8 | 28,060.2 | 2,129.0 | 2,036.3 | 2,218.8 | 2,126.6 | 2,061.2 | 1,802.9 |
| Domestic disap. (1,000 ton) | 19,481.3 | 19,117.2 | 20,387.4 | 21,275.9 | 1,723.4 | 1,570.8 | 1,615.8 | 1,456.7 | 1,565.1 | 1,664.6 |
| Exports (1,000 ton) | 4,916.5 | 6,009.3 | 7,343.0 | 6,871.0 | 366.8 | 512.1 | 760.9 | 610.9 | 532.4 | 180.8 |
| Stocks, beginning (1,000 ton) | 255.4 | 386.9 | 211.7 | 240.2 | 255.6 | 442.3 | 395.7 | 237.9 | 296.8 | 260.4 |
| Margarine, wholesale price, Chicago, white (cts./lb.) | | | | | | | | | | |
| | 55.5 | 51.2 | 40.3 | 40.3 | 52.06 | 54.00 | 55.44 | 55.76 | 55.15 | 53.76 |

* Beginning September 1 for soybeans; October 1 for soybean meal & oil; calendar year for margarine.

Information contacts: Roger Hoskin (202) 786-1840, Tom Bickerton (202) 786-1824.

Table 22.—Farm Programs, Price Supports, Participation & Payment Rates

| | Target price | Loan rate | Findley loan rate | Payment rates | | Base acres 1/ | Program 2/ | Participation rate 3/ |
|----------------------|--------------|-----------|-------------------|---------------|---------------------|---------------|---------------|-----------------------|
| | | | | Deficiency | Paid land diversion | | | |
| | | | | -\$/bu. | Percent 4/ | Mil. acres | | Percent of base |
| Wheat | | | | | | | | |
| 1983/84 | 4.30 | 3.65 | | .65 | 2.70 | 95 | 15/5/10-30 | 78/78/51 |
| 1984/85 | 4.38 | 3.30 | | 1.00 | 2.70 | 85 | 20/10/10-20 | 60/60/20 |
| 1985/86 | 4.38 | 3.30 | | 1.08 | 2.70 | | 20/10/0 | 73 |
| 1986/87 5/ | 4.38 | 3.00 | 2.40 | 1.98 | 2.00 | 1.10 | 22.5/2.5/5-10 | 85/85/21 |
| 1987/88 | 4.38 | 2.85 | 2.28 | 1.81 | | | 27.5/0/0 | 88 |
| 1988/89 | 4.23 | 2.76 | 2.21 | .69 | | | 27.5/0/0 | 86 |
| 1989/90 | 4.10 | 2.58 | 2.06 | 7/ .20 | | | 10/0/0 | 77 |
| 1990/91 | 4.00 | 2.45 | 1.95 | | | | 5/0/0 | |
| Rice | | | | | | | | |
| | | | | \$/cwt | | | | |
| 1983/84 | 11.40 | 8.14 | | 2.77 | 2.70 | 80 | 15/5/10-30 | 98/98/87 |
| 1984/85 | 11.90 | 8.00 | | 3.76 | | | 25/0/0 | 85 |
| 1985/86 | 11.90 | 8.00 | 6/3.16 | 3.90 | 3.50 | | 20/15/0 | 90 |
| 1986/87 5/ | 11.90 | 7.20 | 6/3.82 | 4.70 | | | 35/0/0 | 94 |
| 1987/88 | 11.66 | 6.84 | 6/5.77 | 4.82 | | | 35/0/0 | 96 |
| 1988/89 | 11.15 | 6.63 | 6/6.30 | 4.31 | | | 25/0/0 | 94 |
| 1989/90 | 10.80 | 6.50 | 6/6.50 | 3.00 | | | 25/0/0 | 94 |
| Corn | | | | | | | | |
| | | | | \$/bu. | | | | |
| 1983/84 | 2.86 | 2.65 | | 0 | 1.50 | 80 | 10/10/10-30 | 71/71/60 |
| 1984/85 | 3.03 | 2.55 | | .43 | | | 10/0/0 | 54 |
| 1985/86 | 3.03 | 2.55 | | .48 | | | 10/0/0 | 69 |
| 1986/87 5/ | 3.03 | 2.40 | 1.92 | 1.11 | .73 | | 17.5/2.5/0 | 86 |
| 1987/88 | 3.03 | 2.28 | 1.82 | 1.09 | 2.00 | | 20/15/0 | 90 |
| 1988/89 | 2.93 | 2.21 | 1.77 | 7/ .36 | 1.75 | | 20/10/0; 0/92 | 87 |
| 1989/90 | 2.84 | 2.06 | 1.65 | 7/ .89 | | | 10/0/0; 0/92 | 80 |
| Sorghum | | | | | | | | |
| | | | | \$/bu. | | | | |
| 1983/84 | 2.72 | 2.52 | | 0 | 1.50 | 80 | 8/ [same] | 72/72/53 |
| 1984/85 | 2.88 | 2.42 | | .46 | | | | 42 |
| 1985/86 | 2.88 | 2.42 | | .46 | | | | 55 |
| 1986/87 5/ | 2.88 | 2.28 | 1.82 | 1.06 | .65 | | | 75 |
| 1987/88 | 2.88 | 2.17 | 1.74 | 1.14 | 1.90 | | | 83/42 |
| 1988/89 | 2.78 | 2.10 | 1.68 | .48 | 1.65 | | | 82 |
| 1989/90 | 2.70 | 1.96 | 1.57 | 7/ .95 | | | | 76 |
| Barley | | | | | | | | |
| | | | | \$/bu. | | | | |
| 1983/84 | 2.60 | 2.16 | | .21 | 1.00 | | 8/ [same] | 55/55/0 |
| 1984/85 | 2.60 | 2.08 | | .26 | | | | 44 |
| 1985/86 | 2.60 | 2.08 | | .52 | | | | 57 |
| 1986/87 5/ | 2.60 | 1.95 | 1.56 | .99 | .57 | | | 72 |
| 1987/88 | 2.60 | 1.86 | 1.49 | .79 | 1.60 | | | 84 |
| 1988/89 | 2.51 | 1.80 | 1.44 | 0.00 | 1.40 | | | 79 |
| 1989/90 | 2.43 | 1.68 | 1.34 | 7/ .23 | | | | 67 |
| Oats | | | | | | | | |
| | | | | \$/bu. | | | | |
| 1983/84 | 1.60 | 1.36 | | .11 | .75 | | 8/ [same] | 20/20/0 |
| 1984/85 | 1.60 | 1.31 | | 0 | | | | 14 |
| 1985/86 | 1.60 | 1.31 | | .29 | | | | 14 |
| 1986/87 5/ | 1.60 | 1.23 | .99 | .39 | .36 | | | 37 |
| 1987/88 | 1.60 | 1.17 | .94 | .20 | .80 | | | 45 |
| 1988/89 | 1.55 | 1.13 | .90 | 11/ 0.00 | | | 5/0/0; 0/92 | 30 |
| 1989/90 | 1.50 | 1.06 | .85 | 0.00 | | | 5/0/0; 0/92 | 23 |
| Soybeans 9/ | | | | | | | | |
| | | | | \$/bu. | | | | |
| 1983/84 | | 5.02 | | | | | | |
| 1984/85 | | 5.02 | | | | | | |
| 1985/86 | | 5.02 | | | | | | |
| 1986/87 5/ | | 4.77 | | | | | | |
| 1987/88 | | 4.77 | | | | | | |
| 1988/89 | | 4.77 | | | | | | |
| 1989/90 10/ | | 4.53 | | | | | | |
| Upland cotton | | | | | | | | |
| | | | | Cts./lb. | | | | |
| 1983/84 | 76.0 | 55.00 | | 12.10 | 25.00 | .85 | 20/5/10-30 | 93/93/77 |
| 1984/85 | 81.0 | 55.00 | | 18.60 | | | 25/0/0 | 70 |
| 1985/86 | 81.0 | 57.30 | | 23.70 | 30.00 | | 20/10/0 | 82/0/0 |
| 1986/87 5/ | 81.0 | 55.00 | 11/44.00 | 26.00 | | | 25/0/0 | 93 |
| 1987/88 | 79.4 | 52.25 | 12/ | 17.3 | | | 25/0/0 | 92 |
| 1988/89 | 75.9 | 51.80 | | 19.4 | | | 12.5/0/0 | 89 |
| 1989/90 | 73.4 | 50.00 | | 9.90 | | | 25/0/0 | 89 |

1/ Includes planted area plus acres considered planted (ARP, PLD, 0-92 etc). Net of CRP. Revised April 1989. 2/ Percentage of base acres that farmers participating in Acreage Reduction Programs/Paid Land Diversion/PIK were required to devote to conserving uses to receive program benefits. In addition to the percentages shown for 1983/84, farmers had the option of submitting bids to retire their entire base acreages. 3/ Percentage of base acres enrolled in Acreage Reduction Programs/Paid Land Diversion/PIK. 4/ Percent of program yield, except 1986/87 wheat, which is dollars per bushel. 1983 & 1984 PIK rates apply only to the 10-30 and 10-20 portions, respectively. 5/ Rates for payments received in cash were reduced by 4.3 percent in 1986/87 due to Gramm-Rudman-Hollings. 6/ Annual average world market price. 7/ Guaranteed to farmers signed up for 0/92. 8/ The sorghum, oats, & barley programs were the same as for corn each year except 1983/84, when PIK was not offered on barley & oats, & in 1988 for oats. 9/ There are no target prices, acreage programs, or payment rates for soybeans. 10/ Loan rate is not to be announced prior to August 1, 1989. 11/ Loan repayment rate. 12/ Loans may be repaid at the lower of the loan rate or world market prices.

Information contact: Joy Harwood (202) 786-1840.

Table 23.—Fruit¹

| | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | | | |
|---|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Citrus 1/ Production (1,000 tons) | 16,484 | 15,105 | 12,057 | 13,608 | 10,792 | 10,525 | 11,051 | 11,968 | 12,728 | | | |
| Per capita consumpt. (lbs.) 2/ | 112.5 | 104.4 | 109.3 | 120.0 | 102.8 | 109.1 | 117.3 | 112.8 | 113.6 | | | |
| Noncitrus 3/ Production (1,000 tons) | 15,504 | 13,332 | 14,659 | 14,154 | 14,291 | 14,189 | 13,918 | 16,010 | 15,842 | | | |
| Per capita consumpt. (lbs.) 2/ | 87.6 | 88.0 | 89.2 | 88.7 | 93.9 | 91.8 | 96.4 | 101.5 | 97.7 | | | |
| | 1988 | | | | | 1989 | | | | | | |
| | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June | July |
| F.o.b. shipping point prices | | | | | | | | | | | | |
| Apples (\$/carton) 4/ | 23.05 | 20.45 | 13.80 | 12.15 | 12.63 | 10.78 | 13.94 | 12.32 | 11.25 | 9.41 | 7.86 | 9.55 |
| Pears (\$/box) 5/ | -- | -- | -- | 12.48 | 12.33 | 9.70 | 10.58 | 10.75 | 9.73 | 13.67 | 14.38 | -- |
| Oranges (\$/box) 6/ | 4.90 | 4.17 | 5.48 | 5.82 | 6.50 | 6.20 | 6.21 | 5.27 | 6.64 | 8.52 | 8.10 | 5.04 |
| Grapefruit (\$/box) 6/ | 4.09 | 7.34 | 7.57 | 4.77 | 4.71 | 3.72 | 3.34 | 3.36 | 3.28 | 4.05 | 4.85 | 4.62 |
| Stocks, ending | | | | | | | | | | | | |
| Fresh apples (mil. lbs.) | 5.1 | 1,857.7 | 4,601.8 | 3,904.3 | 3,265.8 | 2,659.6 | 2,094.6 | 1,544.2 | 1,069.1 | 619.3 | 347.3 | 174.9 |
| Fresh pears (mil. lbs.) | 117.6 | 434.0 | 425.7 | 368.3 | 295.5 | 234.6 | 162.9 | 115.1 | 57.7 | 26.6 | 6.4 | 11.0 |
| Frozen fruits (mil. lbs.) | 981.4 | 997.5 | 1,116.0 | 1,011.8 | 937.3 | 834.5 | 759.3 | 671.4 | 601.7 | 574.3 | 621.4 | 730.8 |
| Frozen orange juice (mil. lbs.) | 862.5 | 693.1 | 639.7 | 587.7 | 721.6 | 980.9 | 1,151.1 | 1,086.8 | 1,204.2 | 1,296.1 | 1,296.9 | 1,151.5 |

1/ Crop year beginning with year indicated. 2/ Per capita consumption for total U.S. population, including military consumption of both fresh and processed fruit in fresh weight equivalent. 3/ Calendar year. 4/ Red delicious, Washington, extra fancy, carton tray pack, 125's. 5/ D'Anjou, Washington, standard box wrapped, U.S. no. 1, 135's. 6/ U.S. equivalent on-tree returns. -- = not available.

Information contact: Wynne Happer (202) 786-1885.

Table 24.—Vegetables

| | Calendar year | | | | | | | | | | | | |
|---------------------------------|---------------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|--------|--------|--------|
| | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | | | |
| Production | | | | | | | | | | | | | |
| Total vegetables (1,000 cwt) 1/ | 413,925 | 381,370 | 379,123 | 431,515 | 403,320 | 457,392 | 453,769 | 445,436 | 464,141 | 452,731 | | | |
| Fresh (1,000 cwt) 1/ 2/ | 190,859 | 190,228 | 194,694 | 207,924 | 197,919 | 217,132 | 217,932 | 216,267 | 219,689 | 225,784 | | | |
| Processed (tons) 3/ | 11,153,300 | 9,557,100 | 9,221,460 | 11,179,590 | 10,270,050 | 12,013,020 | 11,791,860 | 11,616,560 | 12,222,620 | 11,347,370 | | | |
| Mushrooms (1,000 lbs.) | 470,069 | 469,576 | 517,146 | 490,826 | 561,531 | 595,681 | 587,956 | 614,393 | 631,819 | 667,367 | | | |
| Potatoes (1,000 cwt) | 342,447 | 302,857 | 338,591 | 355,131 | 333,911 | 362,612 | 407,109 | 361,511 | 385,462 | 349,973 | | | |
| Sweetpotatoes (1,000 cwt) | 13,370 | 10,933 | 12,799 | 14,833 | 12,083 | 12,986 | 14,853 | 12,674 | 12,084 | 11,832 | | | |
| Dry edible beans (1,000 cwt) | 20,552 | 26,729 | 32,751 | 25,563 | 15,520 | 21,070 | 22,175 | 22,886 | 25,909 | 19,230 | | | |
| | 1988 | | | | | | 1989 | | | | | | |
| | July | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June | July |
| Shipments | | | | | | | | | | | | | |
| Fresh (1,000 cwt) 4/ | 21,631 | 21,791 | 15,215 | 16,475 | 20,999 | 16,535 | 18,041 | 18,754 | 24,944 | 20,887 | 35,676 | 31,223 | 21,599 |
| Potatoes (1,000 cwt) | 7,461 | 10,014 | 9,963 | 9,958 | 13,948 | 11,092 | 11,137 | 10,497 | 14,733 | 13,005 | 15,768 | 9,991 | 8,466 |
| Sweetpotatoes (1,000 cwt) | 91 | 212 | 262 | 305 | 876 | 460 | 246 | 278 | 441 | 229 | 190 | 20 | 19 |

1/ 1983 data are not comparable with 1984 & 1985. 2/ Estimate reinstated for asparagus with the 1984 crop; all other years also include broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes. 3/ Estimates reinstated for cucumbers with the 1984 crop; all other years also include snap beans, sweet corn, green peas, & tomatoes. 4/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeydews, & watermelons. -- = not available.

Information contacts: Shannon Hamm or Cathy Greene (202) 786-1884.

Table 25.—Other Commodities

| | Annual | | | | | 1988 | | | 1989 | |
|--|--------|--------|--------|--------|--------|----------|-----------|---------|---------|----------|
| | 1984 | 1985 | 1986 | 1987 | 1988 | Apr-June | July-Sept | Oct-Dec | Jan-Mar | Apr-June |
| Sugar | | | | | | | | | | |
| Production 1/ | 5,890 | 5,969 | 6,257 | 7,309 | 7,087 | 772 | 642 | 3,573 | 1,835 | 677 |
| Deliveries 1/ | 8,454 | 8,035 | 7,786 | 8,167 | 8,188 | 1,983 | 2,147 | 2,107 | 1,902 | 3,958 |
| Stocks, ending 1/ | 3,005 | 3,126 | 3,225 | 3,195 | 3,134 | 2,467 | 1,316 | 3,134 | 3,413 | 2,351 |
| Coffee | | | | | | | | | | |
| Composite green price N.Y. (cts./lb.) | 142.95 | 137.46 | 185.18 | 109.14 | 115.59 | 121.44 | 114.20 | 120.75 | 126.67 | 118.01 |
| Imports, green bean equiv. (mil. lbs.) 2/ | 2,411 | 2,550 | 2,596 | 2,638 | 2,072 | 422 | 594 | 472 | 586 | 535 |
| | Annual | | | | 1988 | 1989 | | | | |
| | 1986 | 1987 | 1988 | May | Dec | Jan | Feb | Mar | Apr | May |
| Tobacco | | | | | | | | | | |
| Prices at auctions 3/ | | | | | | | | | | |
| Flue-cured (\$/lb.) | 1.52 | 1.59 | 1.61 | -- | -- | -- | -- | -- | -- | -- |
| Burley (\$/lb.) | 1.60 | 1.56 | 1.61 | -- | 1.62 | 1.60 | 1.54 | -- | -- | -- |
| Domestic consumption 4/ | | | | | | | | | | |
| Cigarettes (bil.) | 584.0 | 575.0 | 562.5 | 51.6 | 39.5 | 46.9 | 41.9 | 51.7 | 44.4 | 52.9 |
| Large cigars (mil.) | 3,055 | 2,728 | 2,531 | 224.4 | 203.3 | 169.3 | 171.4 | 217.6 | 179.2 | 250.8 |

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green & processed coffee. 3/ Crop year July-June for flue-cured, Oct.-Sept. for burley. 4/ Taxable removals. -- = not available.

Information contacts: sugar, Peter Buzzanell (202) 786-1888, coffee, Fred Gray (202) 786-1888, tobacco, Verner Grise (202) 786-1890.

Table 26.—World Supply & Utilization of Major Crops, Livestock, & Products

| | 1983/84 | 1984/85 | 1985/86 | 1986/87 | 1987/88 | 1988/89 P | 1989/90 F |
|--------------------------------|---------------|---------|---------|---------|---------|-----------|-----------|
| | Million units | | | | | | |
| Wheat | | | | | | | |
| Area (hectares) | 228.9 | 231.2 | 229.6 | 228.2 | 219.9 | 218.2 | 226.6 |
| Production (metric tons) | 489.3 | 511.9 | 500.1 | 530.7 | 501.8 | 501.0 | 528.0 |
| Exports (metric tons) 1/ | 102.0 | 107.0 | 85.0 | 90.7 | 104.7 | 97.7 | 98.3 |
| Consumption (metric tons) 2/ | 474.0 | 493.0 | 496.2 | 522.4 | 531.6 | 531.5 | 536.5 |
| Ending stocks (metric tons) 3/ | 145.1 | 164.0 | 167.9 | 176.1 | 146.3 | 115.9 | 107.3 |
| Coarse grains | | | | | | | |
| Area (hectares) | 335.0 | 334.6 | 341.3 | 337.3 | 323.2 | 327.3 | 328.1 |
| Production (metric tons) | 688.1 | 815.8 | 843.3 | 835.5 | 791.5 | 730.0 | 800.3 |
| Exports (metric tons) 1/ | 93.4 | 100.4 | 83.2 | 84.1 | 83.4 | 97.2 | 96.9 |
| Consumption (metric tons) 2/ | 759.3 | 782.6 | 779.0 | 809.6 | 811.9 | 801.3 | 815.4 |
| Ending stocks (metric tons) 3/ | 110.7 | 143.9 | 208.1 | 234.0 | 213.6 | 142.4 | 127.2 |
| Rice, milled | | | | | | | |
| Area (hectares) | 144.1 | 144.1 | 144.6 | 145.1 | 140.6 | 145.0 | 145.5 |
| Production (metric tons) | 307.9 | 318.8 | 318.8 | 318.3 | 312.8 | 327.8 | 330.7 |
| Exports (metric tons) 4/ | 12.4 | 11.4 | 12.6 | 13.0 | 11.9 | 14.3 | 13.1 |
| Consumption (metric tons) 2/ | 304.5 | 310.6 | 319.3 | 323.2 | 319.0 | 325.5 | 331.1 |
| Ending stocks (metric tons) 3/ | 46.6 | 54.9 | 54.7 | 50.2 | 44.0 | 46.3 | 45.9 |
| Total grains | | | | | | | |
| Area (hectares) | 708.0 | 709.9 | 715.5 | 710.6 | 683.7 | 690.5 | 700.2 |
| Production (metric tons) | 1,485.3 | 1,646.5 | 1,662.2 | 1,684.5 | 1,606.1 | 1,558.8 | 1,659.0 |
| Exports (metric tons) 1/ | 207.8 | 218.8 | 180.8 | 187.8 | 200.0 | 209.2 | 208.3 |
| Consumption (metric tons) 2/ | 1,537.8 | 1,586.2 | 1,594.5 | 1,655.2 | 1,662.5 | 1,658.3 | 1,683.0 |
| Ending stocks (metric tons) 3/ | 302.4 | 362.8 | 430.7 | 460.3 | 403.9 | 304.6 | 280.4 |
| Oilseeds | | | | | | | |
| Crush (metric tons) | 135.8 | 150.7 | 155.0 | 161.4 | 166.8 | 165.7 | 173.1 |
| Production (metric tons) | 165.0 | 191.1 | 196.1 | 194.2 | 207.9 | 201.7 | 213.4 |
| Exports (metric tons) | 33.0 | 33.1 | 34.5 | 37.7 | 39.5 | 31.8 | 33.7 |
| Ending stocks (metric tons) | 15.7 | 21.1 | 26.8 | 23.5 | 23.8 | 21.2 | 21.7 |
| Meals | | | | | | | |
| Production (metric tons) | 92.5 | 101.8 | 105.0 | 110.4 | 114.3 | 112.1 | 117.8 |
| Exports (metric tons) | 29.7 | 32.3 | 34.4 | 36.7 | 36.3 | 36.4 | 39.1 |
| Oils | | | | | | | |
| Production (metric tons) | 42.1 | 46.2 | 49.3 | 50.3 | 52.7 | 53.3 | 55.8 |
| Exports (metric tons) | 13.7 | 15.6 | 16.4 | 16.9 | 17.6 | 17.5 | 18.3 |
| Cotton | | | | | | | |
| Area (hectares) | 31.0 | 33.9 | 31.9 | 29.9 | 31.1 | 34.0 | 32.9 |
| Production (bales) | 65.6 | 88.2 | 79.6 | 70.4 | 80.8 | 84.0 | 80.8 |
| Exports (bales) | 19.2 | 20.2 | 20.2 | 26.0 | 23.2 | 25.6 | 25.0 |
| Consumption (bales) | 68.3 | 70.0 | 75.8 | 82.5 | 83.9 | 83.8 | 85.3 |
| Ending stocks (bales) | 24.0 | 42.4 | 47.2 | 33.6 | 30.8 | 30.1 | 25.2 |
| | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 F |
| Red meat | | | | | | | |
| Production (metric tons) | 97.5 | 99.6 | 103.5 | 106.4 | 108.8 | 109.9 | 110.6 |
| Consumption (metric tons) | 95.8 | 97.6 | 101.5 | 105.3 | 107.1 | 108.6 | 109.1 |
| Exports (metric tons) 1/ | 5.9 | 5.9 | 6.2 | 6.6 | 6.6 | 6.7 | 7.0 |
| Poultry | | | | | | | |
| Production (metric tons) | 24.4 | 25.2 | 26.2 | 27.4 | 29.2 | 30.1 | 31.3 |
| Consumption (metric tons) | 24.3 | 24.8 | 26.0 | 27.0 | 28.8 | 29.7 | 30.8 |
| Exports (metric tons) 1/ | 1.3 | 1.3 | 1.2 | 1.3 | 1.5 | 1.5 | 1.6 |
| Dairy | | | | | | | |
| Milk production (metric tons) | 413.0 | 413.5 | 419.1 | 427.0 | 427.0 | 430.5 | 433.1 |

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years & do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1984 data correspond with 1983/84, etc. P = preliminary. F = forecast.

Information contacts: Frederic Surls (202) 786-1824; red meat & poultry, Linda Bailey (202) 786-1286; dairy, Sara Short (202) 786-1769.

U.S. Agricultural Trade

Table 27.—Prices of Principal U.S. Agricultural Trade Products

| | Annual | | | 1988 | | 1989 | | | | |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1986 | 1987 | 1988 | July | Feb | Mar | Apr | May | June | July |
| Export commodities | | | | | | | | | | |
| Wheat, f.o.b. vessel, Gulf ports (\$/bu.) | 3.19 | 3.11 | 3.97 | 4.10 | 4.70 | 4.88 | 4.79 | 4.82 | 4.62 | 4.57 |
| Corn, f.o.b. vessel, Gulf ports (\$/bu.) | 2.27 | 1.95 | 2.73 | 3.31 | 3.00 | 3.03 | 2.95 | 3.02 | 2.91 | 2.74 |
| Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.) | 2.16 | 1.88 | 2.52 | 3.02 | 2.81 | 2.83 | 2.76 | 2.84 | 2.67 | 2.60 |
| Soybeans, f.o.b. vessel, Gulf ports (\$/bu.) | 5.45 | 5.55 | 7.81 | 9.11 | 7.89 | 8.05 | 7.61 | 7.61 | 7.48 | 7.26 |
| Soybean oil, Decatur (cts./lb.) | 16.36 | 15.85 | 23.52 | 29.31 | 21.02 | 22.02 | 21.88 | 22.23 | 20.78 | 19.87 |
| Soybean meal, Decatur (\$/ton) | 157.62 | 175.57 | 234.75 | 257.53 | 234.18 | 235.70 | 220.90 | 215.09 | 227.36 | 230.23 |
| Cotton, 8-market avg. spot (cts./lb.) | 53.47 | 64.35 | 57.25 | 57.40 | 55.39 | 57.60 | 61.43 | 63.70 | 64.18 | 67.39 |
| Tobacco, avg. price at auction (cts./lb.) | 153.96 | 144.32 | 147.93 | 140.88 | 159.74 | 159.74 | 160.43 | 160.43 | 160.43 | 160.31 |
| Rice, f.o.b. mill, Houston (\$/cwt) | 14.60 | 13.15 | 19.60 | 20.50 | 15.00 | 15.00 | 15.00 | 15.00 | 15.50 | 16.50 |
| Inedible tallow, Chicago (cts./lb.) | 9.03 | 13.79 | 16.64 | 18.81 | 16.00 | 14.86 | 14.60 | 14.70 | 15.10 | 14.48 |
| Import commodities | | | | | | | | | | |
| Coffee, N.Y. spot (\$/lb.) | 2.01 | 1.09 | 1.21 | 1.21 | 1.31 | 1.28 | 1.33 | 1.36 | 1.21 | .88 |
| Rubber, N.Y. spot (cts./lb.) | 42.87 | 50.65 | 59.20 | 66.05 | 59.34 | 56.69 | 55.23 | 52.07 | 49.50 | 49.16 |
| Cocoa beans, N.Y. (\$/lb.) | .88 | .87 | .69 | .71 | .68 | .64 | .58 | .54 | .54 | .58 |

Information contact: Mary Teymourian (202) 786-1820.

Table 28.—Indexes of Real Trade-Weighted Dollar Exchange Rates ¹

| | 1988 (revised) | | | | 1989 (revised) | | | | | | | |
|---------------------|----------------|------|------|------|----------------|------|-------|-------|-------|--------|--------|-------|
| | Sept | Oct | Nov | Dec | Jan | Feb | Mar P | Apr P | May P | June P | July P | Aug P |
| | 1985 = 100 | | | | | | | | | | | |
| Total U.S. trade 2/ | 70.8 | 68.9 | 66.3 | 66.3 | 68.6 | 69.3 | 70.2 | 70.4 | 73.2 | 74.7 | 71.8 | 72.4 |
| Agricultural trade | | | | | | | | | | | | |
| U.S. markets | 79.3 | 77.8 | 75.7 | 75.6 | 77.2 | 77.5 | 79.5 | 79.2 | 81.1 | 82.2 | 80.6 | 81.3 |
| U.S. competitors | 84.4 | 83.5 | 82.1 | 81.9 | 82.1 | 82.0 | 82.4 | 82.5 | 83.7 | 83.9 | 84.7 | 85.2 |
| Wheat | | | | | | | | | | | | |
| U.S. markets | 90.3 | 89.5 | 88.1 | 88.8 | 91.0 | 91.5 | 94.2 | 93.3 | 94.5 | 94.6 | 95.1 | 96.1 |
| U.S. competitors | 80.2 | 78.3 | 77.0 | 76.1 | 76.2 | 76.1 | 77.2 | 77.5 | 79.2 | 79.9 | 78.6 | 79.1 |
| Soybeans | | | | | | | | | | | | |
| U.S. markets | 71.4 | 69.7 | 67.2 | 67.1 | 69.1 | 69.6 | 70.3 | 70.3 | 72.6 | 74.2 | 71.9 | 72.4 |
| U.S. competitors | 78.6 | 76.1 | 75.5 | 74.3 | 71.9 | 70.3 | 72.6 | 71.9 | 71.2 | 70.1 | 76.9 | 78.3 |
| Corn | | | | | | | | | | | | |
| U.S. markets | 71.6 | 69.8 | 67.4 | 67.2 | 68.3 | 68.6 | 70.6 | 70.1 | 72.0 | 73.6 | 71.9 | 72.6 |
| U.S. competitors | 78.7 | 76.0 | 74.1 | 73.6 | 73.9 | 73.4 | 73.4 | 73.7 | 75.5 | 76.1 | 74.4 | 74.7 |
| Cotton | | | | | | | | | | | | |
| U.S. markets | 76.8 | 75.3 | 73.1 | 72.9 | 74.2 | 74.4 | 75.0 | 74.8 | 76.1 | 77.2 | 75.9 | 76.2 |
| U.S. competitors | 84.7 | 84.0 | 82.5 | 82.5 | 82.4 | 81.5 | 83.7 | 82.1 | 83.9 | 83.8 | 83.9 | 84.3 |

^{1/} Real indexes adjust nominal exchange rates for differences in rates of inflation, to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of Agricultural Outlook for a discussion of the calculations and the weights used. ^{2/} Federal Reserve Board index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets. P = preliminary. R = revised

Information contact: Tim Baxter, David Stallings (202) 786-1706.

Table 29.—Trade Balance

| | Fiscal year 1/ | | | | | | | | | June |
|----------------------|----------------|---------|---------|----------|----------|----------|----------|----------|--------|---------|
| | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 F | 1989 |
| | \$ million | | | | | | | | | |
| Exports | | | | | | | | | | |
| Agricultural | 43,783 | 39,097 | 34,769 | 38,027 | 31,201 | 26,312 | 27,876 | 35,334 | 39,000 | 3,057 |
| Nonagricultural | 185,420 | 176,308 | 159,373 | 170,014 | 179,236 | 179,291 | 202,911 | 258,638 | -- | 26,854 |
| Total 2/ | 229,203 | 215,405 | 194,142 | 208,041 | 210,437 | 205,603 | 230,787 | 293,972 | -- | 29,911 |
| Imports | | | | | | | | | | |
| Agricultural | 17,218 | 15,485 | 16,373 | 18,916 | 19,740 | 20,884 | 20,650 | 21,011 | 21,000 | 1,720 |
| Nonagricultural | 237,469 | 233,349 | 230,527 | 297,736 | 313,722 | 342,846 | 367,374 | 409,141 | -- | 38,268 |
| Total 3/ | 254,687 | 248,834 | 246,900 | 316,652 | 333,462 | 363,730 | 388,024 | 430,152 | -- | 39,988 |
| Trade balance | | | | | | | | | | |
| Agricultural | 26,565 | 23,612 | 18,396 | 19,111 | 11,461 | 5,428 | 7,226 | 14,323 | 18,000 | 1,337 |
| Nonagricultural | -52,049 | -57,041 | -71,154 | -127,722 | -134,486 | -163,555 | -164,463 | -150,503 | -- | -11,414 |
| Total | -25,484 | -33,429 | -52,758 | -108,611 | -123,025 | -158,127 | -157,237 | -136,180 | -- | -10,077 |

^{1/} Fiscal years begin October 1 & end September 30. Fiscal year 1988 began Oct. 1, 1987 & ended Sept. 30, 1988.

^{2/} Domestic exports including Department of Defense shipments (F.A.S. value). ^{3/} Imports for consumption (customs value). F = forecast. -- = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 30.—U.S. Agricultural Exports & Imports

| | Fiscal year* | | | | June | Fiscal year* | | | | June |
|--|--------------|---------|---------|----------|--------|--------------|--------|--------|----------|-------|
| | 1986 | 1987 | 1988 | 1989 F | 1989 | 1986 | 1987 | 1988 | 1989 F | 1989 |
| | 1,000 units | | | | | \$ million | | | | |
| EXPORTS | | | | | | | | | | |
| Animals, live (no.) 1/ | 570 | 275 | 1,082 | -- | 71 | 344 | 331 | 452 | -- | 16 |
| Meats & preps., excl. poultry (mt) | 451 | 548 | 631 | 2/600 | 86 | 1,012 | 1,300 | 1,797 | -- | 207 |
| Dairy products (mt) | 480 | 445 | 388 | -- | 58 | 431 | 491 | 536 | 500 | 43 |
| Poultry meats (mt) | 265 | 376 | 390 | 400 | 44 | 282 | 406 | 424 | -- | 48 |
| Fats, oils, & greases (mt) | 1,355 | 1,220 | 1,362 | 3/1,400 | 107 | 477 | 417 | 545 | -- | 40 |
| Hides & skins incl. furskins | -- | -- | -- | -- | -- | 1,440 | 1,666 | 1,838 | -- | 161 |
| Cattle hides, whole (no.) 1/ | 25,596 | 24,333 | 23,282 | -- | 2,454 | 1,131 | 1,254 | 1,457 | -- | 126 |
| Mink pelts (no.) 1/ | 2,697 | 2,760 | 2,455 | -- | 316 | 65 | 103 | 88 | -- | 8 |
| Grains & feeds (mt) | 74,358 | 90,211 | 108,905 | -- | 10,189 | 9,472 | 9,059 | 12,581 | 4/16,300 | 1,450 |
| Wheat (mt) | 25,501 | 28,204 | 40,501 | 37,000 | 2,471 | 3,260 | 2,877 | 4,467 | 5/6,200 | 407 |
| Wheat flour (mt) | 1,094 | 1,305 | 1,046 | 1,300 | 18 | 203 | 207 | 171 | -- | 4 |
| Rice (mt) | 2,382 | 2,454 | 2,173 | 2,400 | 201 | 648 | 551 | 731 | 800 | 66 |
| Feed grains, incl. products (mt) | 36,236 | 47,606 | 53,308 | 62,500 | 6,483 | 3,817 | 3,752 | 5,209 | 7,500 | 786 |
| Feeds & fodders (mt) | 8,392 | 10,113 | 11,233 | 6/11,000 | 955 | 1,286 | 1,455 | 1,719 | -- | 153 |
| Other grain products (mt) | 1,015 | 755 | 908 | -- | 88 | 332 | 285 | 361 | -- | 46 |
| Fruits, nuts, and preps. (mt) | 2,003 | 2,146 | 2,409 | -- | 206 | 1,766 | 2,050 | 2,368 | -- | 190 |
| Fruit juices incl. | | | | | | | | | | |
| froz. (1,000 hectoliters) 1/ | 3,652 | 4,364 | 5,497 | -- | 526 | 148 | 185 | 252 | -- | 27 |
| Vegetables & preps. (mt) | 1,442 | 1,629 | 1,826 | -- | 259 | 997 | 1,176 | 1,282 | -- | 149 |
| Tobacco, unmanufactured (mt) | 224 | 224 | 229 | 200 | 12 | 1,318 | 1,203 | 1,296 | 1,300 | 68 |
| Cotton, excl. linters (mt) | 482 | 1,306 | 1,388 | 1,400 | 55 | 678 | 1,419 | 2,136 | 2,000 | 75 |
| Seeds (mt) | 269 | 305 | 286 | -- | 18 | 367 | 371 | 415 | 400 | 19 |
| Sugar, cane or beet (mt) | 375 | 582 | 318 | -- | 34 | 75 | 113 | 98 | -- | 12 |
| Oilseeds & products (mt) | 27,583 | 29,725 | 29,471 | -- | 1,173 | 6,271 | 6,308 | 7,700 | 6,800 | 371 |
| Oilseeds (mt) | 20,684 | 21,905 | 21,366 | -- | 920 | 4,394 | 4,423 | 5,238 | -- | 271 |
| Soybeans (mt) | 20,139 | 21,394 | 20,908 | 15,400 | 849 | 4,174 | 4,205 | 5,008 | 4,300 | 240 |
| Protein meal (mt) | 5,614 | 6,786 | 6,406 | 4,500 | 174 | 1,132 | 1,347 | 1,502 | 1,300 | 45 |
| Vegetable oils (mt) | 1,284 | 1,035 | 1,699 | -- | 79 | 746 | 538 | 961 | -- | 55 |
| Essential oils (mt) | 7 | 8 | 9 | -- | 1 | 105 | 111 | 120 | -- | 16 |
| Other | 568 | 565 | 668 | -- | 36 | 1,129 | 1,273 | 1,495 | -- | 166 |
| Total | 109,862 | 129,290 | 148,280 | 146,500 | 12,278 | 26,312 | 27,876 | 35,334 | 39,000 | 3,057 |
| IMPORTS | | | | | | | | | | |
| Animals, live (no.) 1/ | 1,885 | 1,994 | 2,238 | -- | 163 | 637 | 610 | 729 | 700 | 53 |
| Meats & preps., excl. poultry (mt) | 1,139 | 1,282 | 1,280 | -- | 94 | 2,248 | 2,797 | 2,788 | -- | 215 |
| Beef & veal (mt) | 693 | 778 | 779 | 725 | 58 | 1,252 | 1,575 | 1,681 | 1,600 | 136 |
| Pork (mt) | 406 | 462 | 456 | 410 | 32 | 900 | 1,125 | 1,001 | 900 | 68 |
| Dairy products (mt) | 768 | 461 | 337 | 355 | 27 | 787 | 849 | 881 | 800 | 68 |
| Poultry & products 1/ | -- | -- | -- | -- | -- | 101 | 112 | 97 | -- | 14 |
| Fats, oils, & greases (mt) | 22 | 21 | 20 | -- | 1 | 17 | 18 | 19 | -- | 1 |
| Hides & skins, incl. furskins 1/ | -- | -- | -- | -- | -- | 200 | 304 | 247 | -- | 15 |
| Wool, unmanufactured (mt) | 53 | 60 | 56 | -- | 5 | 160 | 201 | 292 | -- | 21 |
| Grains & feeds (mt) | 2,299 | 2,336 | 3,050 | 3,300 | 251 | 670 | 727 | 868 | 1,000 | 89 |
| Fruits, nuts, & preps., excl. juices (mt) | 4,637 | 4,840 | 4,797 | 4,795 | 395 | 1,980 | 2,178 | 2,169 | -- | 178 |
| Bananas & plantains (mt) | 3,042 | 3,106 | 3,030 | 2,950 | 264 | 744 | 817 | 820 | 800 | 73 |
| Fruit juices (1,000 hectoliters) 1/ | 31,539 | 34,059 | 26,758 | 27,000 | 2,374 | 698 | 728 | 768 | -- | 61 |
| Vegetables & preps. (mt) | 2,199 | 2,446 | 2,520 | 2,550 | 206 | 1,560 | 1,509 | 1,593 | 1,700 | 150 |
| Tobacco, unmanufactured (mt) | 208 | 225 | 217 | 200 | 11 | 606 | 634 | 611 | 500 | 35 |
| Cotton, unmanufactured (mt) | 41 | 38 | 36 | -- | 1 | 14 | 7 | 9 | -- | 7/ |
| Seeds (mt) | 89 | 133 | 143 | 170 | 3 | 111 | 156 | 153 | 200 | 7 |
| Nursery stock & cut flowers 1/ | -- | -- | -- | -- | -- | 352 | 369 | 419 | -- | 27 |
| Sugar, cane or beet (mt) | 1,905 | 1,492 | 1,069 | -- | 149 | 654 | 497 | 368 | -- | 58 |
| Oilseeds & products (mt) | 1,515 | 1,572 | 1,772 | 1,865 | 178 | 641 | 579 | 838 | 900 | 91 |
| Oilseeds (mt) | 197 | 165 | 208 | -- | 32 | 69 | 56 | 71 | -- | 12 |
| Protein meal (mt) | 138 | 245 | 253 | -- | 24 | 15 | 30 | 42 | -- | 4 |
| Vegetable oils (mt) | 1,173 | 1,162 | 1,311 | -- | 123 | 555 | 493 | 725 | -- | 75 |
| Beverages, excl. fruit juices (1,000 hectoliters) 1/ | 15,488 | 15,547 | 15,583 | -- | 1,369 | 1,848 | 1,923 | 2,008 | -- | 161 |
| Coffee, tea, cocoa, spices (mt) | 1,940 | 1,915 | 1,842 | -- | 136 | 6,099 | 4,867 | 4,274 | -- | 299 |
| Coffee, incl. products (mt) | 1,223 | 1,206 | 1,050 | 1,000 | 76 | 4,402 | 3,233 | 2,600 | 2,800 | 187 |
| Cocoa beans & products (mt) | 507 | 503 | 562 | 530 | 41 | 1,191 | 1,088 | 1,164 | 1,000 | 66 |
| Rubber & allied gums (mt) | 801 | 824 | 846 | 875 | 64 | 615 | 714 | 949 | 1,000 | 69 |
| Other | -- | -- | -- | -- | -- | 886 | 871 | 931 | -- | 107 |
| Total | -- | -- | -- | -- | -- | 20,884 | 20,650 | 21,011 | 21,000 | 1,720 |

*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1988 began Oct. 1, 1987 & ended Sept. 30, 1988. 1/ not included in total volume. 2/ forecasts for footnoted items 2/-6/ are based on slightly different groups of commodities. Fiscal 1988 exports of categories used in the 1989 forecasts were 2/ 561,000 m. tons. 3/ 1.347 million dollars 4/ 12,743 million. 5/ 4,638 million, i.e. includes flour. 6/ 11.095 million m. tons. 7/ Less than \$500. F = forecast. -- = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 31.—U.S. Agricultural Exports by Region

| Region & country | Fiscal year* | | | | June 1989 | Change from year* earlier | | | | June 1989 |
|-----------------------------|--------------|--------|--------|--------|--------------|---------------------------|------|------|--------|--------------|
| | 1986 | 1987 | 1988 | 1989 F | | 1986 | 1987 | 1988 | 1989 F | |
| | \$ million | | | | | Percent | | | | |
| Western Europe | 6,851 | 7,219 | 8,029 | 7,400 | 367 | -5 | 5 | 11 | -7 | -13 |
| European Community (EC-12) | 6,435 | 6,787 | 7,513 | 6,900 | 343 | -3 | 5 | 11 | -8 | -13 |
| Belgium-Luxembourg | 361 | 423 | 429 | -- | 22 | -23 | 17 | 1 | -- | 69 |
| France | 431 | 495 | 565 | -- | 28 | 9 | 15 | 14 | -- | -45 |
| Germany, Fed. Rep. | 1,001 | 1,266 | 1,306 | -- | 51 | 11 | 26 | 3 | -- | -23 |
| Italy | 686 | 733 | 713 | -- | 40 | 1 | 6 | -3 | -- | -9 |
| Netherlands | 2,042 | 1,954 | 2,087 | -- | 73 | 6 | -4 | 7 | -- | -16 |
| United Kingdom | 628 | 666 | 819 | -- | 46 | 0 | 6 | 23 | -- | -34 |
| Portugal | 308 | 271 | 340 | -- | 27 | -39 | -12 | 25 | -- | 18 |
| Spain, incl. Canary Islands | 723 | 658 | 848 | -- | 37 | -13 | -9 | 29 | -- | 56 |
| Other Western Europe | 415 | 432 | 516 | 500 | 23 | -19 | 4 | 20 | 0 | -7 |
| Switzerland | 128 | 145 | 191 | -- | 9 | -45 | 13 | 32 | -- | -7 |
| Eastern Europe | 447 | 453 | 559 | 400 | 34 | -16 | 1 | 23 | -33 | -21 |
| German Dem. Rep. | 52 | 66 | 67 | -- | 7 | -36 | 27 | 0 | -- | 34 |
| Poland | 42 | 63 | 167 | -- | 6 | -66 | 50 | 165 | -- | -20 |
| Yugoslavia | 134 | 131 | 104 | -- | 1 | -2 | -21 | -- | -- | -92 |
| Romania | 112 | 115 | 93 | -- | 4 | 27 | 3 | -19 | -- | -75 |
| USSR | 1,105 | 659 | 1,934 | 3,500 | 356 | -56 | -40 | 193 | 84 | 300 |
| Asia | 10,494 | 11,990 | 15,928 | 18,800 | 1,485 | -12 | 14 | 33 | 18 | 9 |
| West Asia (Mideast) | 1,243 | 1,664 | 1,903 | 2,200 | 155 | -14 | 34 | 14 | 16 | 5 |
| Turkey | 111 | 117 | 120 | -- | 17 | -13 | 5 | 3 | -- | 83 |
| Iraq | 335 | 528 | 735 | 900 | 53 | -10 | 58 | 39 | 29 | -17 |
| Israel | 255 | 244 | 334 | -- | 29 | -15 | -4 | 37 | -- | -26 |
| Saudi Arabia | 335 | 489 | 464 | 400 | 30 | -12 | 46 | -5 | -13 | 82 |
| South Asia | 517 | 345 | 805 | -- | 60 | -14 | -33 | 133 | -- | -43 |
| Bangladesh | 94 | 111 | 107 | -- | 28 | -54 | 18 | -3 | -- | 2,700 |
| India | 90 | 93 | 354 | -- | 21 | -30 | 3 | 281 | -- | -57 |
| Pakistan | 285 | 98 | 276 | 500 | 2 | 25 | -66 | 181 | 67 | -96 |
| China | 83 | 235 | 613 | 1,500 | 66 | -65 | 183 | 161 | 150 | -5 |
| Japan | 5,139 | 5,554 | 7,274 | 8,100 | 671 | -9 | 8 | 31 | 11 | 14 |
| Southeast Asia | 724 | 708 | 1,015 | -- | 60 | -14 | -2 | 43 | -- | -18 |
| Indonesia | 172 | 152 | 238 | -- | 12 | -16 | -12 | 56 | -- | 14 |
| Philippines | 269 | 259 | 345 | 400 | 22 | -6 | -4 | 33 | 33 | -41 |
| Other East Asia | 2,788 | 3,485 | 4,318 | 4,700 | 473 | -11 | 25 | 24 | 9 | 25 |
| Taiwan | 1,109 | 1,354 | 1,577 | 1,600 | 154 | -17 | 22 | 16 | 0 | -1 |
| Korea, Rep. | 1,277 | 1,693 | 2,250 | 2,500 | 277 | -9 | 33 | 33 | 11 | 52 |
| Hong Kong | 400 | 436 | 488 | 600 | 42 | 1 | 9 | 12 | 20 | 1 |
| Africa | 2,134 | 1,784 | 2,272 | 2,400 | 161 | -16 | -16 | 27 | 6 | -29 |
| North Africa | 1,401 | 1,279 | 1,659 | 1,900 | 120 | 16 | -9 | 30 | 12 | -37 |
| Morocco | 159 | 196 | 193 | -- | 12 | 2 | 23 | -2 | -- | 29 |
| Algeria | 329 | 244 | 537 | 700 | 42 | 50 | -26 | 120 | 30 | -24 |
| Egypt | 875 | 761 | 786 | 1,000 | 56 | 14 | -13 | 3 | 25 | -49 |
| Sub-Sahara | 733 | 505 | 613 | 500 | 41 | -44 | -31 | 21 | -17 | 12 |
| Nigeria | 158 | 67 | 44 | -- | 1 | -57 | -58 | -35 | -- | -54 |
| Rep. S. Africa | 70 | 49 | 85 | -- | 3 | -63 | -30 | 74 | -- | 13 |
| Latin America & Caribbean | 3,598 | 3,765 | 4,401 | 5,100 | 397 | -21 | 5 | 17 | 16 | 20 |
| Brazil | 445 | 418 | 176 | 100 | 21 | -20 | -6 | -58 | -50 | 493 |
| Caribbean Islands | 752 | 829 | 867 | -- | 94 | -2 | 10 | 5 | -- | 37 |
| Central America | 334 | 377 | 413 | -- | 23 | -7 | 13 | 10 | -- | -28 |
| Colombia | 137 | 115 | 178 | -- | 13 | -42 | -16 | 55 | -- | -8 |
| Mexico | 1,114 | 1,215 | 1,726 | 2,400 | 192 | -29 | 9 | 42 | 41 | 28 |
| Peru | 108 | 140 | 174 | -- | 8 | 2 | 30 | 24 | -- | 26 |
| Venezuela | 493 | 459 | 597 | 600 | 29 | -32 | -7 | 30 | 0 | -14 |
| Canada | 1,466 | 1,776 | 1,973 | 2,200 | 239 | -15 | 21 | 11 | 10 | 39 |
| Oceania | 216 | 230 | 238 | 300 | 19 | 6 | 6 | 3 | 50 | -28 |
| Total | 26,312 | 27,876 | 35,334 | 40,000 | 3,057 | -16 | 6 | 27 | 13 | 14 |
| Developed countries | 13,957 | 15,031 | 17,883 | 18,400 | 1,322 | -8 | 8 | 19 | 3 | 6 |
| Less developed countries | 10,720 | 11,498 | 14,346 | 16,100 | 1,279 | -15 | 7 | 25 | 13 | 4 |
| Centrally planned countries | 1,636 | 1,347 | 3,106 | 5,500 | 455 | -50 | -18 | 131 | 77 | 126 |

*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1988 began Oct. 1, 1987 & ended Sept. 30, 1988. F = forecast.

-- = not available.

Note: Adjusted for transshipments through Canada.

Information contact: Stephen MacDonald (202) 786-1822.

Farm Income

Table 32.—Farm Income Statistics

| | Calendar year | | | | | | | | | | |
|--|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 F |
| | \$ billion | | | | | | | | | | |
| 1. Farm receipts | 133.8 | 142.0 | 144.1 | 147.1 | 141.1 | 146.8 | 149.1 | 140.6 | 145.3 | 157.2 | 158 to 168 |
| Crops (incl. net CCC loans) | 62.3 | 71.7 | 72.5 | 72.3 | 67.1 | 69.5 | 74.3 | 64.0 | 63.8 | 72.6 | 75 to 79 |
| Livestock | 69.2 | 68.0 | 69.2 | 70.3 | 69.4 | 73.0 | 69.8 | 71.5 | 75.7 | 78.9 | 78 to 82 |
| Farm related 1/ | 2.2 | 2.3 | 2.5 | 4.5 | 4.5 | 4.4 | 5.0 | 5.1 | 5.8 | 5.7 | 5 to 7 |
| 2. Direct Government payments | 1.4 | 1.3 | 1.9 | 3.5 | 9.3 | 8.4 | 7.7 | 11.8 | 16.7 | 14.5 | 9 to 12 |
| Cash payments | 1.4 | 1.3 | 1.9 | 3.5 | 4.1 | 4.0 | 7.6 | 8.1 | 6.6 | 8.0 | 8 to 10 |
| Value of PIK commodities | 0.0 | 0.0 | 0.0 | 0.0 | 5.2 | 4.5 | 0.1 | 3.7 | 10.1 | 7.0 | 1 to 2 |
| 3. Total gross farm income (4+5+6) 2/ | 150.7 | 149.3 | 166.6 | 163.5 | 153.1 | 174.9 | 166.6 | 160.4 | 171.6 | 177.6 | 187 to 192 |
| 4. Gross cash income (1+2) | 135.1 | 143.3 | 146.0 | 150.6 | 150.4 | 155.2 | 156.9 | 152.5 | 162.0 | 171.6 | 170 to 175 |
| 5. Nonmoney income 3/ | 10.6 | 12.3 | 13.8 | 14.3 | 13.5 | 13.4 | 11.8 | 10.6 | 10.0 | 10.3 | 8 to 10 |
| 6. Value of inventory change | 5.0 | -6.3 | 6.5 | -1.4 | -10.9 | 6.3 | -2.4 | -2.7 | 1.4 | -4.3 | 4 to 7 |
| 7. Cash expenses 4/ | 101.7 | 109.1 | 113.2 | 112.8 | 113.5 | 116.6 | 110.2 | 100.7 | 104.3 | 111.7 | 116 to 120 |
| 8. Total expenses | 123.3 | 133.1 | 139.4 | 140.0 | 140.4 | 142.7 | 134.0 | 122.4 | 124.5 | 132.0 | 136 to 140 |
| 9. Net cash income (4-7) | 33.4 | 34.2 | 32.8 | 37.8 | 36.9 | 38.6 | 46.7 | 51.8 | 57.7 | 59.9 | 52 to 57 |
| 10. Net farm income (3-8) | 27.4 | 16.1 | 26.9 | 23.5 | 12.7 | 32.2 | 32.4 | 38.0 | 47.1 | 45.7 | 48 to 53 |
| Deflated (1982\$) | 34.9 | 18.8 | 28.6 | 23.5 | 12.2 | 29.9 | 29.2 | 33.4 | 40.0 | 37.6 | 39 to 43 |
| 11. Off-farm income | 33.8 | 34.7 | 35.8 | 36.4 | 37.0 | 38.9 | 42.6 | 44.6 | 46.8 | 51.7 | 51 to 55 |
| 12. Loan charges 5/: Real estate | 13.0 | 9.9 | 9.1 | 3.8 | 2.3 | -1.1 | -6.0 | -9.2 | -7.7 | -4.0 | 0 to 3 |
| 13. 5/: Non-real estate | 11.2 | 5.3 | 6.5 | 3.4 | 0.9 | -0.8 | -9.6 | -10.7 | -4.9 | 1.0 | 0 to 2 |
| 14. Rental income plus monetary change | 6.3 | 6.1 | 6.4 | 6.3 | 5.3 | 8.9 | 8.8 | 7.8 | 6.8 | 8.0 | 7 to 9 |
| 15. Capital expenditures 5/ | 20.1 | 18.0 | 16.8 | 13.3 | 12.7 | 12.5 | 9.2 | 8.5 | 9.8 | 10.2 | 10 to 12 |
| 16. Net cash flow (9+12+13+14-15) | 43.8 | 37.6 | 37.8 | 38.1 | 32.7 | 33.1 | 30.7 | 31.2 | 42.1 | 52.7 | 48 to 58 |

1/ Income from machine hire, custom work, sales of forest products, & other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food & imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, & farm household expenses. 5/ Excludes farm households. Totals may not add because of rounding. F = forecast.

Information contact: Andy Bernat (202) 786-1808.

Table 33.—Balance Sheet of the U.S. Farming Sector

| | Calendar year 1/ | | | | | | | | | | |
|----------------------------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 F |
| | \$ billion | | | | | | | | | | |
| Assets | | | | | | | | | | | |
| Real estate | 706.1 | 782.4 | 784.7 | 748.8 | 738.7 | 637.7 | 555.9 | 507.3 | 518.5 | 546.0 | 580 to 590 |
| Non-real estate | 201.6 | 213.2 | 212.0 | 212.2 | 205.6 | 209.0 | 190.5 | 182.2 | 187.8 | 202.5 | 196 to 202 |
| Livestock & poultry | 61.4 | 60.6 | 53.5 | 53.0 | 49.7 | 49.6 | 46.3 | 47.6 | 57.9 | 65.7 | 65 to 69 |
| Machinery & motor vehicles | 85.8 | 93.1 | 101.4 | 102.0 | 100.8 | 96.9 | 87.6 | 80.3 | 73.9 | 74.7 | 74 to 78 |
| Crops stored 2/ | 29.2 | 33.0 | 29.1 | 27.7 | 23.9 | 29.7 | 23.6 | 19.1 | 20.9 | 26.2 | 18 to 22 |
| Financial assets | 25.3 | 26.5 | 28.0 | 29.5 | 31.3 | 32.8 | 33.0 | 35.2 | 35.2 | 35.9 | 35 to 37 |
| Total farm assets | 907.7 | 995.6 | 996.7 | 961.0 | 944.3 | 846.7 | 746.4 | 689.5 | 706.3 | 748.5 | 780 to 790 |
| Liabilities | | | | | | | | | | | |
| Real estate debt 3/ | 79.7 | 89.6 | 98.7 | 102.5 | 104.8 | 103.6 | 97.6 | 88.6 | 81.1 | 76.7 | 75 to 79 |
| Non-real estate debt 4/ | 71.8 | 77.1 | 83.6 | 87.0 | 87.9 | 87.1 | 77.5 | 66.6 | 62.0 | 61.7 | 60 to 64 |
| Total farm debt | 151.6 | 166.8 | 182.3 | 189.5 | 192.7 | 190.7 | 175.1 | 155.1 | 143.1 | 138.4 | 134 to 142 |
| Total farm equity | 756.1 | 828.9 | 814.4 | 771.5 | 751.6 | 656.0 | 571.3 | 534.4 | 563.3 | 610.0 | 643 to 653 |
| | Percent | | | | | | | | | | |
| Selected ratios | | | | | | | | | | | |
| Debt-to-assets | 16.7 | 16.8 | 18.3 | 19.7 | 20.4 | 22.5 | 23.5 | 22.5 | 20.3 | 18.5 | 17 to 18 |
| Debt-to-equity | 20.1 | 20.1 | 22.4 | 24.6 | 25.6 | 29.1 | 30.6 | 29.0 | 25.4 | 22.7 | 21 to 22 |
| Debt-to-net cash income | 454 | 488 | 556 | 497 | 523 | 493 | 375 | 299 | 248 | 231 | 243 to 253 |

1/ As of Dec. 31. 2/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 3/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 4/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 786-1798.

Table 34.—Cash Receipts from Farm Marketings, by State

| Region & State | Livestock & products | | | | Crops 1/ | | | | Total 1/ | | | |
|-----------------------|----------------------|---------------|--------------|--------------|---------------|---------------|--------------|--------------|----------------|----------------|---------------|---------------|
| | 1987 | 1988 | May 1989 | June 1989 | 1987 | 1988 | May 1989 | June 1989 | 1987 | 1988 | May 1989 | June 1989 |
| | \$ million 2/ | | | | | | | | | | | |
| North Atlantic | | | | | | | | | | | | |
| Maine | 228 | 216 | 19 | 18 | 184 | 188 | 24 | 10 | 412 | 404 | 43 | 28 |
| New Hampshire | 67 | 60 | 5 | 5 | 72 | 77 | 5 | 3 | 139 | 137 | 10 | 8 |
| Vermont | 377 | 352 | 31 | 28 | 45 | 53 | 3 | 2 | 422 | 405 | 34 | 30 |
| Massachusetts | 121 | 105 | 9 | 9 | 259 | 297 | 16 | 15 | 379 | 402 | 26 | 24 |
| Rhode Island | 13 | 13 | 1 | 1 | 64 | 65 | 4 | 2 | 77 | 78 | 6 | 4 |
| Connecticut | 191 | 180 | 14 | 15 | 194 | 202 | 16 | 11 | 385 | 382 | 30 | 25 |
| New York | 1,809 | 1,781 | 158 | 143 | 800 | 824 | 40 | 45 | 2,610 | 2,605 | 198 | 188 |
| New Jersey | 195 | 192 | 17 | 16 | 438 | 450 | 35 | 43 | 633 | 642 | 52 | 59 |
| Pennsylvania | 2,310 | 2,348 | 204 | 188 | 904 | 935 | 68 | 61 | 3,213 | 3,284 | 272 | 249 |
| North Central | | | | | | | | | | | | |
| Ohio | 1,616 | 1,604 | 151 | 138 | 1,862 | 2,025 | 103 | 121 | 3,478 | 3,629 | 254 | 259 |
| Indiana | 1,874 | 1,749 | 150 | 164 | 1,832 | 2,367 | 103 | 154 | 3,706 | 4,117 | 252 | 318 |
| Illinois | 2,249 | 2,243 | 180 | 180 | 3,850 | 4,218 | 248 | 345 | 6,099 | 6,461 | 428 | 525 |
| Michigan | 1,282 | 1,206 | 105 | 108 | 1,311 | 1,464 | 76 | 88 | 2,594 | 2,670 | 181 | 196 |
| Wisconsin | 4,216 | 4,281 | 372 | 365 | 799 | 767 | 42 | 46 | 5,015 | 5,048 | 414 | 411 |
| Minnesota | 3,561 | 3,364 | 297 | 307 | 2,270 | 2,743 | 176 | 228 | 5,831 | 6,107 | 473 | 535 |
| Iowa | 5,202 | 5,045 | 449 | 400 | 3,563 | 4,029 | 214 | 256 | 8,765 | 9,074 | 663 | 656 |
| Missouri | 2,102 | 2,011 | 160 | 170 | 1,586 | 1,814 | 58 | 205 | 3,687 | 3,826 | 218 | 375 |
| North Dakota | 762 | 849 | 48 | 48 | 1,601 | 1,574 | 88 | 95 | 2,363 | 2,423 | 136 | 143 |
| South Dakota | 1,907 | 1,965 | 117 | 111 | 820 | 945 | 44 | 49 | 2,726 | 2,911 | 162 | 160 |
| Nebraska | 4,857 | 5,336 | 455 | 409 | 1,967 | 2,643 | 197 | 232 | 6,824 | 7,979 | 652 | 641 |
| Kansas | 3,919 | 4,265 | 428 | 349 | 1,963 | 2,329 | 117 | 200 | 5,882 | 6,594 | 545 | 549 |
| Southern | | | | | | | | | | | | |
| Delaware | 370 | 444 | 9 | 8 | 116 | 149 | 7 | 11 | 487 | 592 | 16 | 19 |
| Maryland | 734 | 768 | 37 | 34 | 405 | 459 | 29 | 30 | 1,140 | 1,226 | 66 | 64 |
| Virginia | 1,275 | 1,294 | 75 | 75 | 484 | 592 | 20 | 38 | 1,759 | 1,886 | 94 | 113 |
| West Virginia | 174 | 179 | 14 | 14 | 60 | 70 | 1 | 5 | 234 | 248 | 16 | 19 |
| North Carolina | 2,111 | 2,179 | 136 | 137 | 1,658 | 1,994 | 76 | 126 | 3,768 | 4,173 | 212 | 263 |
| South Carolina | 450 | 488 | 40 | 35 | 479 | 590 | 22 | 70 | 929 | 1,078 | 62 | 105 |
| Georgia | 1,825 | 2,011 | 88 | 93 | 1,299 | 1,553 | 57 | 113 | 3,124 | 3,544 | 145 | 206 |
| Florida | 1,086 | 1,114 | 92 | 91 | 4,368 | 4,697 | 796 | 282 | 5,454 | 5,811 | 888 | 373 |
| Kentucky | 1,507 | 1,538 | 77 | 95 | 940 | 992 | 25 | 49 | 2,448 | 2,530 | 102 | 144 |
| Tennessee | 1,110 | 1,080 | 81 | 102 | 874 | 965 | 33 | 66 | 1,984 | 2,046 | 114 | 168 |
| Alabama | 1,521 | 1,695 | 75 | 68 | 633 | 706 | 33 | 48 | 2,154 | 2,400 | 108 | 116 |
| Mississippi | 1,042 | 1,176 | 56 | 62 | 945 | 1,164 | 16 | 60 | 1,987 | 2,341 | 72 | 121 |
| Arkansas | 2,083 | 2,278 | 103 | 116 | 1,112 | 1,696 | 33 | 155 | 3,195 | 3,974 | 137 | 271 |
| Louisiana | 511 | 587 | 46 | 57 | 965 | 1,299 | 31 | 34 | 1,476 | 1,885 | 77 | 91 |
| Oklahoma | 2,066 | 2,284 | 185 | 173 | 811 | 1,127 | 65 | 197 | 2,877 | 3,410 | 250 | 370 |
| Texas | 6,092 | 6,498 | 553 | 534 | 2,907 | 3,783 | 198 | 293 | 8,998 | 10,281 | 751 | 827 |
| Western | | | | | | | | | | | | |
| Montana | 747 | 816 | 47 | 32 | 608 | 570 | 30 | 28 | 1,355 | 1,386 | 77 | 60 |
| Idaho | 924 | 1,033 | 88 | 74 | 1,164 | 1,258 | 85 | 74 | 2,089 | 2,291 | 172 | 148 |
| Wyoming | 528 | 575 | 42 | 21 | 127 | 156 | 8 | 3 | 655 | 730 | 50 | 24 |
| Colorado | 2,323 | 2,655 | 221 | 190 | 885 | 1,037 | 80 | 88 | 3,207 | 3,692 | 301 | 278 |
| New Mexico | 817 | 910 | 53 | 56 | 351 | 362 | 23 | 37 | 1,168 | 1,272 | 75 | 93 |
| Arizona | 773 | 793 | 61 | 62 | 987 | 1,167 | 100 | 53 | 1,760 | 1,959 | 162 | 116 |
| Utah | 466 | 537 | 44 | 41 | 134 | 150 | 6 | 9 | 600 | 687 | 50 | 51 |
| Nevada | 164 | 150 | 14 | 12 | 69 | 79 | 3 | 3 | 232 | 229 | 17 | 15 |
| Washington | 981 | 1,141 | 94 | 93 | 1,880 | 2,146 | 125 | 174 | 2,862 | 3,287 | 219 | 268 |
| Oregon | 655 | 669 | 43 | 48 | 1,236 | 1,427 | 66 | 83 | 1,890 | 2,096 | 109 | 131 |
| California | 4,426 | 4,704 | 455 | 377 | 11,382 | 11,894 | 1,023 | 771 | 15,808 | 16,598 | 1,478 | 1,148 |
| Alaska | 11 | 10 | 1 | 1 | 19 | 20 | 1 | 1 | 30 | 30 | 2 | 2 |
| Hawaii | 88 | 89 | 8 | 8 | 473 | 479 | 40 | 39 | 560 | 568 | 48 | 47 |
| United States | 75,717 | 78,862 | 6,209 | 5,880 | 63,751 | 72,569 | 4,707 | 5,153 | 139,468 | 151,431 | 10,916 | 11,034 |

1/ Sales of farm products include receipts from commodities placed under CCC loans minus value of redemptions during the period. 2/ Estimates as of end of current month. Totals may not add because of rounding.

Information contact: Roger Strickland (202) 786-1804.

Table 35.—Cash Receipts from Farming

| | Annual | | | | | | 1988 | | | | | |
|------------------------------|------------|---------|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|
| | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | June | Feb | Mar | Apr | May | June |
| | \$ million | | | | | | | | | | | |
| Farm marketings & CCC loans* | 136,567 | 142,439 | 144,135 | 135,539 | 139,468 | 151,431 | 12,110 | 11,015 | 10,779 | 10,698 | 10,916 | 11,034 |
| Livestock & products | 69,438 | 72,968 | 69,845 | 71,534 | 75,717 | 78,862 | 6,075 | 6,228 | 6,250 | 6,010 | 6,209 | 5,880 |
| Meat animals | 38,893 | 40,832 | 38,589 | 39,122 | 44,276 | 45,975 | 3,401 | 4,133 | 3,872 | 3,713 | 3,806 | 3,548 |
| Dairy products | 18,763 | 17,944 | 18,063 | 17,753 | 17,710 | 17,668 | 1,416 | 1,435 | 1,568 | 1,559 | 1,612 | 1,508 |
| Poultry & eggs | 9,981 | 12,223 | 11,211 | 12,661 | 11,480 | 12,864 | 1,080 | 521 | 651 | 580 | 630 | 655 |
| Other | 1,801 | 1,969 | 1,982 | 1,997 | 2,252 | 2,354 | 177 | 139 | 159 | 158 | 161 | 170 |
| Crops | 67,129 | 69,471 | 74,290 | 64,005 | 63,751 | 72,569 | 6,035 | 4,787 | 4,530 | 4,687 | 4,707 | 5,153 |
| Food grains | 9,713 | 9,740 | 8,993 | 5,638 | 5,581 | 7,700 | 1,380 | 345 | 292 | 312 | 430 | 1,402 |
| Feed crops | 15,535 | 15,668 | 22,520 | 17,161 | 13,102 | 15,291 | 1,509 | 1,262 | 1,104 | 964 | 949 | 1,315 |
| Cotton (lint & seed) | 3,705 | 3,674 | 3,687 | 3,605 | 4,087 | 4,668 | 110 | 530 | 60 | 123 | 91 | 51 |
| Tobacco | 2,752 | 2,813 | 2,722 | 1,918 | 1,827 | 2,039 | 0 | 17 | 0 | 21 | 0 | 0 |
| Oil-bearing crops | 13,546 | 13,641 | 12,474 | 10,571 | 11,159 | 13,699 | 803 | 714 | 731 | 515 | 546 | 488 |
| Vegetables & melons | 8,459 | 9,138 | 8,558 | 8,826 | 9,718 | 9,819 | 839 | 722 | 979 | 1,168 | 1,297 | 642 |
| Fruits & tree nuts | 6,056 | 6,733 | 6,957 | 7,246 | 8,257 | 8,872 | 816 | 533 | 454 | 442 | 527 | 677 |
| Other | 7,365 | 8,065 | 8,381 | 9,041 | 10,020 | 10,476 | 578 | 664 | 909 | 1,142 | 866 | 578 |
| Government payments | 9,295 | 8,430 | 7,704 | 11,813 | 16,747 | 14,480 | 1,548 | 2,208 | 1,103 | 902 | 820 | 237 |
| Total | 145,862 | 150,869 | 151,839 | 147,352 | 156,215 | 165,911 | 13,658 | 13,223 | 11,882 | 11,600 | 11,736 | 11,271 |

*Receipts from loans represent value of commodities placed under CCC loans minus value of redemptions during the month.

Information contact: Roger Strickland (202) 786-1804.

Table 36.—Farm Production Expenses

| | Calendar year | | | | | | | | | |
|--------------------------------------|---------------|---------|---------|---------|---------|---------|---------|---------|---------|--------------------|
| | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 F |
| | \$ million | | | | | | | | | |
| Feed | 20,971 | 20,855 | 18,592 | 21,725 | 19,852 | 18,015 | 16,179 | 16,898 | 20,962 | 20,000 to 24,000 |
| Livestock | 10,670 | 8,999 | 9,684 | 8,814 | 9,498 | 8,958 | 9,744 | 11,845 | 12,812 | 11,000 to 14,000 |
| Seed | 3,220 | 3,428 | 3,172 | 2,993 | 3,448 | 3,350 | 2,984 | 3,009 | 3,138 | 3,000 to 4,000 |
| Farm-origin inputs | 34,861 | 33,282 | 31,448 | 33,532 | 32,798 | 30,323 | 28,907 | 31,752 | 36,913 | 36,000 to 40,000 |
| Fertilizer | 9,491 | 9,409 | 8,018 | 7,067 | 7,429 | 7,258 | 5,787 | 5,610 | 6,400 | 6,000 to 8,000 |
| Fuels & oils | 7,879 | 8,570 | 7,888 | 7,503 | 7,143 | 6,584 | 4,790 | 4,442 | 4,544 | 4,000 to 6,000 |
| Electricity | 1,526 | 1,747 | 2,041 | 2,146 | 2,166 | 2,150 | 1,942 | 2,393 | 2,572 | 2,000 to 3,000 |
| Pesticides | 3,539 | 4,201 | 4,282 | 4,154 | 4,767 | 4,994 | 4,484 | 4,588 | 4,716 | 5,000 to 6,000 |
| Manufactured inputs | 22,435 | 23,927 | 22,229 | 20,870 | 21,505 | 20,986 | 17,003 | 17,033 | 18,233 | 18,000 to 22,000 |
| Short-term interest | 8,717 | 10,722 | 11,349 | 10,615 | 10,396 | 8,821 | 7,795 | 7,305 | 7,287 | 7,000 to 9,000 |
| Real estate interest 1/ | 7,544 | 9,142 | 10,481 | 10,815 | 10,733 | 9,878 | 9,131 | 8,187 | 7,885 | 7,000 to 9,000 |
| Total interest charges | 16,261 | 19,864 | 21,830 | 21,430 | 21,129 | 18,699 | 16,926 | 15,492 | 15,172 | 15,000 to 17,000 |
| Repair & maintenance 1/ 2/ | 7,075 | 7,021 | 6,428 | 6,529 | 6,416 | 6,370 | 6,426 | 6,546 | 6,858 | 7,000 to 8,000 |
| Contract & hired labor | 9,293 | 8,931 | 10,075 | 9,725 | 9,729 | 9,799 | 9,890 | 10,821 | 11,202 | 11,000 to 13,000 |
| Machine hire & custom work | 1,823 | 1,984 | 2,025 | 1,896 | 2,170 | 2,184 | 1,810 | 1,956 | 2,171 | 2,000 to 3,000 |
| Marketing, storage, & transportation | 3,070 | 3,523 | 4,301 | 3,904 | 4,012 | 4,127 | 3,652 | 3,823 | 3,279 | 4,000 to 5,000 |
| Misc. operating expenses 1/ | 6,881 | 6,909 | 7,262 | 9,089 | 9,106 | 8,232 | 7,993 | 8,306 | 8,809 | 6,000 to 8,000 |
| Other operating expenses | 28,142 | 28,368 | 30,089 | 31,143 | 31,433 | 30,712 | 29,771 | 31,452 | 32,328 | 32,000 to 36,000 |
| Capital consumption 1/ | 21,474 | 23,573 | 24,287 | 23,873 | 23,105 | 20,847 | 18,918 | 17,364 | 17,422 | 17,000 to 18,000 |
| Taxes 1/ | 3,891 | 4,246 | 4,036 | 4,469 | 4,059 | 4,231 | 4,125 | 4,345 | 4,378 | 4,000 to 5,000 |
| Net rent to nonoperator landlord | 6,075 | 6,184 | 6,059 | 5,060 | 8,640 | 8,158 | 6,737 | 7,060 | 7,527 | 7,000 to 8,000 |
| Other overhead expenses | 31,440 | 34,003 | 34,381 | 33,402 | 35,804 | 33,236 | 29,780 | 28,769 | 29,326 | 28,000 to 31,000 |
| Total production expenses | 133,139 | 139,444 | 139,980 | 140,377 | 142,669 | 133,956 | 122,387 | 124,498 | 131,963 | 136,000 to 140,000 |

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses include other livestock purchases & dairy assessments. Totals may not add because of rounding. F = forecast.

Information contacts: Chris McGath (202) 786-1804, Andy Bernat (202) 786-1808.

Table 37.—CCC Net Outlays by Commodity¹ & Function

| | Fiscal year | | | | | | | | | | |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|--------|--------|
| | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 E | 1990 E |
| | \$ million | | | | | | | | | | |
| COMMODITY/PROGRAM | | | | | | | | | | | |
| Feed grains | 1,286 | -533 | 5,397 | 6,815 | -758 | 5,211 | 12,211 | 13,967 | 9,053 | 4,169 | 7,067 |
| Wheat | 879 | 1,543 | 2,238 | 3,419 | 2,536 | 4,691 | 3,440 | 2,836 | 678 | 84 | 197 |
| Rice | -76 | 24 | 164 | 664 | 333 | 990 | 947 | 906 | 128 | 692 | 561 |
| Upland cotton | 64 | 336 | 1,190 | 1,363 | 244 | 1,553 | 2,142 | 1,786 | 666 | 1,723 | 298 |
| Tobacco | -88 | -51 | 103 | 880 | 346 | 455 | 253 | -346 | -453 | -481 | -201 |
| Dairy | 1,011 | 1,894 | 2,182 | 2,528 | 1,502 | 2,085 | 2,337 | 1,166 | 1,295 | 658 | 686 |
| Soybeans | 116 | 87 | 169 | 288 | -585 | 711 | 1,597 | -476 | -1,676 | -19 | 168 |
| Peanuts | 28 | 28 | 12 | -6 | 1 | 12 | 32 | 8 | 7 | 6 | 4 |
| Sugar | -405 | -121 | -5 | 49 | 10 | 184 | 214 | -65 | -246 | 0 | 0 |
| Honey | 9 | 8 | 27 | 48 | 90 | 81 | 89 | 73 | 100 | 66 | 56 |
| Wool | 35 | 42 | 54 | 94 | 132 | 109 | 123 | 152 | 1/ 5 | 95 | 110 |
| Operating expense 2/ | 157 | 159 | 294 | 328 | 362 | 346 | 457 | 535 | 614 | 623 | 635 |
| Interest expenditure | 518 | 220 | -13 | 3,525 | 1,064 | 1,435 | 1,411 | 1,219 | 395 | 206 | 347 |
| Export programs 3/ | -669 | -940 | 65 | 398 | 743 | 134 | 102 | 276 | 200 | 122 | 106 |
| Other | -113 | 1,340 | -225 | -1,542 | 1,295 | -314 | 486 | 371 | 1,695 | 5,540 | 1,314 |
| Total | 2,752 | 4,036 | 11,652 | 18,851 | 7,315 | 17,683 | 25,841 | 22,408 | 12,461 | 13,484 | 11,348 |
| FUNCTION | | | | | | | | | | | |
| Price-support loans (net) | -66 | 174 | 7,015 | 8,438 | -27 | 6,272 | 13,628 | 12,199 | 4,579 | -138 | 1,500 |
| Direct payments | | | | | | | | | | | |
| Deficiency | 79 | 0 | 1,185 | 2,780 | 612 | 6,302 | 6,166 | 4,833 | 3,971 | 5,559 | 6,024 |
| Diversion | 56 | 0 | 0 | 705 | 1,504 | 1,525 | 64 | 382 | 8 | -1 | 0 |
| Dairy termination | 0 | 0 | 0 | 0 | 0 | 0 | 489 | 587 | 260 | 110 | 211 |
| Other | 25 | 0 | 0 | 0 | 0 | 0 | 27 | 60 | 0 | 45 | 0 |
| Disaster | 258 | 1,030 | 306 | 115 | 1 | 0 | 0 | 0 | 6 | 0 | 0 |
| Total direct payments | 418 | 1,030 | 1,491 | 3,600 | 2,117 | 7,827 | 6,746 | 5,862 | 4,245 | 5,713 | 6,235 |
| 1988 crop disaster | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,750 | 0 |
| Emergency livestock/ forage assistance | 23 | 329 | 16 | 0 | 0 | 0 | 0 | 0 | 31 | 608 | 201 |
| Purchases (net) | 1,681 | 1,602 | 2,031 | 2,540 | 1,470 | 1,331 | 1,670 | -479 | -1,131 | 390 | 60 |
| Producer storage payments | 254 | 32 | 679 | 964 | 268 | 329 | 485 | 832 | 658 | 343 | 141 |
| Processing, storage, & transportation | 259 | 323 | 355 | 665 | 639 | 657 | 1,013 | 1,659 | 1,113 | 602 | 780 |
| Operating expense 2/ | 157 | 159 | 294 | 328 | 362 | 346 | 457 | 535 | 614 | 623 | 635 |
| Interest expenditure | 518 | 220 | -13 | 3,525 | 1,064 | 1,435 | 1,411 | 1,219 | 395 | 206 | 347 |
| Export programs 3/ | -669 | -940 | 65 | 398 | 743 | 134 | 102 | 276 | 200 | 122 | 106 |
| Other | 177 | 1,107 | -281 | -1,607 | 679 | -648 | 329 | 305 | 1,757 | 1,265 | 1,343 |
| Total | 2,752 | 4,036 | 11,652 | 18,851 | 7,315 | 17,683 | 25,841 | 22,408 | 12,461 | 13,484 | 11,348 |

1/ Fiscal 1988 wool & mohair program outlays were \$130,635,000 but include a one-time advance appropriation of \$126,108,000, which was recorded as a wool program receipt by Treasury. 2/ Does not include CCC transfers to general sales manager. 3/ Includes export guarantee program, direct export credit program, and CCC transfers to the general sales manager. E = Estimated in the fiscal 1990 mid-session review. Fiscal 1990 estimated outlays do not incorporate the impact of the Drought Assistance Act of 1989. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazdalski (202) 467-5148.

Food Expenditures

Table 38.—Food Expenditure Estimates

| | Annual | | | 1989 | | | 1989 year-to-date | | |
|---|----------------|----------------|----------------|--------------|--------------|--------------|-------------------|---------------|----------------|
| | 1986 | 1987 | 1988 | May P | June P | July P | May | June | July P |
| \$ billion | | | | | | | | | |
| Sales 1/ Off-premise use 2/ Meals and snacks 3/ | 237.1 158.2 | 244.9 174.2 | 255.7 186.8 | 23.3 16.8 | 23.4 17.2 | 23.7 17.6 | 109.0 78.0 | 132.3 95.2 | 156.1 112.8 |
| 1988 \$ billion | | | | | | | | | |
| Sales 1/ Off-premise use 2/ Meals and snacks 3/ | 257.6 171.3 | 255.2 181.3 | 255.7 186.8 | 21.9 16.1 | 21.9 16.5 | 22.2 16.8 | 103.5 75.5 | 125.4 92.0 | 147.5 108.8 |
| Percent change from year earlier (\$ bil.) | | | | | | | | | |
| Sales 1/ Off-premise use 2/ Meals and snacks 3/ | 3.3 6.7 | 3.3 10.1 | 4.4 7.2 | 9.3 6.4 | 8.7 6.7 | 6.1 5.0 | 7.1 6.7 | 7.4 6.7 | 7.2 6.4 |
| Percent change from year earlier (1988 \$ bil.) | | | | | | | | | |
| Sales 1/ Off-premise use 2/ Meals and snacks 3/ | .3 2.7 | -.8 5.8 | .2 3.0 | 1.2 1.4 | 1.2 2.0 | -.3 .3 | -.5 2.0 | -.2 2.0 | -.2 1.7 |

1/ Food only (excludes alcoholic beverages). Not seasonally adjusted. 2/ Excludes donations and home production. 3/ Excludes donations, child nutrition subsidies, and meals furnished to employees, patients, and inmates. P = preliminary.

NOTE: This table differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food, not alcoholic beverages and pet food, which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at annual rates; (3) this series reports sales only, but PCE includes food produced and consumed on farms and food furnished to employees; (4) this series includes all sales of meals and snacks. PCE includes only purchases using personal funds, excluding business travel and entertainment. For a more complete discussion of the differences, see "Developing an Integrated Information System for the Food Sector," Agr.-Econ. Rpt. No. 575, Aug. 1987.

Information contact: Alden Manchester (202) 786-1880.

Transportation

Table 39.—Rail Rates; Grain & Fruit/Vegetable Shipments

| | Annual | | | 1989 | | | | | | |
|--|--------|-------|-------|-------|--------|--------|---------|---------|---------|---------|
| | 1986 | 1987 | 1988 | July | Feb | Mar | Apr | May | June | July |
| Rail freight rate index 1/ (Dec. 1984=100) | | | | | | | | | | |
| All products | 100.7 | 100.1 | 104.8 | 105.2 | 105.9 | 105.9 | 106.1 P | 106.1 P | 106.4 P | 106.6 P |
| Farm products | 99.6 | 99.3 | 105.6 | 106.2 | 108.9 | 108.6 | 109.0 P | 108.6 P | 107.7 P | 108.3 P |
| Grain | 98.9 | 98.7 | 105.4 | 106.4 | 109.2 | 109.8 | 109.2 P | 108.8 P | 107.8 P | 108.5 P |
| Food products | 99.9 | 98.6 | 103.2 | 103.7 | 103.1 | 103.7 | 103.1 P | 103.3 P | 103.8 P | 104.0 P |
| Grain shipments | | | | | | | | | | |
| Rail carloadings (1,000 cars) 2/ | 24.4 | 29.0 | 30.7 | 29.7 | 29.8 P | 31.8 P | 30.1 P | 25.9 P | 27.3 P | 25.0 P |
| Fresh fruit & vegetable shipments | | | | | | | | | | |
| Piggy back (1,000 cwt) 3/ 4/ | 629 | 588 | 532 | 662 | 419 | 455 | 502 | 763 | 709 | 603 |
| Rail (1,000 cwt) 3/ 4/ | 563 | 630 | 608 | 488 | 583 | 686 | 571 | 683 | 900 | 521 |
| Truck (1,000 cwt) 3/ 4/ | 9,031 | 9,137 | 9,602 | 9,609 | 8,650 | 9,391 | 10,293 | 11,301 | 12,277 | 9,762 |
| Cost of operating trucks hauling produce 5/ | | | | | | | | | | |
| Owner operator (cts./mile) | 113.1 | 116.3 | 118.7 | 118.2 | 122.1 | 122.9 | 124.1 | 123.5 | 123.4 | 123.4 |
| Fleet operation (cts./mile) | 113.6 | 116.5 | 118.4 | 118.2 | 121.4 | 121.9 | 123.1 | 122.6 | 122.7 | 122.9 |

1/ Department of Labor, Bureau of Labor Statistics. 2/ Weekly average; from Association of American Railroads. 3/ Weekly average; from Agricultural Marketing Service, USDA. 4/ Preliminary data for 1988 & 1989. 5/ Office of Transportation, USDA. P = preliminary.

Information contact: T.Q. Hutchinson (202) 786-1840.

Indicators of Farm Productivity

Table 40.—Indexes of Farm Production Input Use & Productivity¹

| | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 2/ |
|-----------------------------------|------|------|------|------|------|------|------|------|------|---------|
| 1977=100 | | | | | | | | | | |
| Farm output | 111 | 104 | 118 | 116 | 96 | 112 | 118 | 111 | 110 | 99 |
| All livestock products 3/ | 104 | 108 | 109 | 107 | 109 | 107 | 110 | 110 | 113 | 116 |
| Meat animals | 103 | 107 | 106 | 101 | 104 | 101 | 102 | 100 | 102 | 105 |
| Dairy products | 101 | 105 | 108 | 110 | 114 | 110 | 117 | 116 | 116 | 118 |
| Poultry & eggs | 114 | 115 | 119 | 119 | 120 | 123 | 128 | 133 | 144 | 149 |
| All crops 4/ | 113 | 101 | 117 | 117 | 88 | 111 | 118 | 109 | 106 | 92 |
| Feed grains | 116 | 97 | 121 | 122 | 67 | 116 | 134 | 123 | 105 | 73 |
| Hay & forage | 108 | 98 | 106 | 109 | 100 | 107 | 106 | 106 | 103 | 90 |
| Food grains | 108 | 121 | 144 | 138 | 117 | 129 | 121 | 106 | 106 | 98 |
| Sugar crops | 94 | 97 | 107 | 96 | 93 | 95 | 97 | 106 | 112 | 107 |
| Cotton | 102 | 79 | 109 | 85 | 55 | 91 | 94 | 69 | 104 | 108 |
| Tobacco | 80 | 93 | 108 | 104 | 75 | 90 | 81 | 63 | 64 | 71 |
| Oil crops | 129 | 99 | 114 | 121 | 91 | 106 | 117 | 110 | 106 | 88 |
| Cropland used for crops | 100 | 101 | 102 | 101 | 88 | 99 | 98 | 94 | 88 | 87 |
| Crop production per acre | 113 | 100 | 115 | 116 | 100 | 112 | 120 | 116 | 122 | 106 |
| Farm input 5/ | 105 | 103 | 102 | 99 | 97 | 95 | 92 | 87 | 86 | -- |
| Farm real estate | 103 | 103 | 104 | 102 | 101 | 97 | 95 | 93 | 92 | -- |
| Mechanical power & machinery | 104 | 101 | 98 | 92 | 88 | 84 | 80 | 75 | 72 | -- |
| Agricultural chemicals | 123 | 123 | 129 | 118 | 105 | 121 | 123 | 110 | 111 | -- |
| Feed, seed, & livestock purchases | 115 | 114 | 108 | 108 | 110 | 106 | 106 | 103 | 108 | -- |
| Farm output per unit of input | 105 | 101 | 116 | 117 | 99 | 119 | 128 | 127 | 127 | -- |
| Output per hour of labor | | | | | | | | | | |
| Farm 6/ | 113 | 109 | 123 | 125 | 99 | 121 | 139 | 139 | 142 | -- |
| Nonfarm 7/ | 99 | 99 | 100 | 99 | 102 | 105 | 106 | 108 | 109 | -- |

1/ For historical data & indexes, see Economic Indicators of the Farm Sector: Production & Efficiency Statistics, 1986, ECIFS 5-6. 2/ Preliminary indexes for 1988 based on Crop Production: 1988 Summary, released in January 1989, & unpublished data from the Agricultural Statistics Board, NASS. 3/ Gross livestock production includes minor livestock products not included in the separate groups shown. It cannot be added to gross crop production to compute farm output. 4/ Gross crop production includes some miscellaneous crops not in the separate groups shown. It cannot be added to gross livestock production to compute farm output. 5/ Includes other items not included in the separate groups shown. 6/ Economic Research Service. 7/ Bureau of Labor Statistics. -- = not available.

Information contact: Jim Hauver (202) 786-1459.

Food Supply and Use

Table 41.—Per Capita Consumption of Major Food Commodities
(See the March 1989 issue.)

Information contact: Judy Putnam (202) 786-1870.

Are we approaching a world food crisis?

That's the question addressed in a new report from the Economic Research Service. The question is raised by a confusing array of facts. Most of the world's good farmland is already in production, nearly all the available irrigation water has been tapped, and groundwater supplies are shrinking. **If world population stabilizes sometime around the end of the next century (as currently projected), the world should have enough nonrenewable resources, such as land, water, and energy, to feed a growing population at a gradually improving standard of living.** But these resources are unevenly distributed, resulting in often prolonged, though localized, shortages. And although world food production per capita continues to increase, it's doing so at a slower rate.

Order your copy of this vital report now. With it you can sort out and put into perspective the recent spate of "no-hope, new-hope" news articles on our world's potential to feed itself.

Read the recent special issue of World Agriculture, an ERS publication... In a scholarly 75 pages by its own specialists, it tackles such subjects as "Famines Past and Future" ... "Environmental Degradation of Agriculture" ... "Climate Change and Agriculture" ... "Short-Term World Food Security" ... "Technology: Are We Running Out of Steam?" and more.

—From *USDA Executive Notes*, Aug. 1989

This report costs \$5.50 domestic and \$7.00 foreign (includes Canada). To order your copy, call toll-free, 1-800-999-6779, and ask for *World Agriculture, SPECIAL ISSUE, WAS-55*. Or return the order form below. Your order will be sent by first-class mail.

World Agriculture Situation and Outlook
SPECIAL ISSUE WAS-55

Please send me _____ copies.

Price: \$5.50 domestic; \$7.00 foreign (includes Canada)

☐ Bill me. ☐ Enclosed is \$_____.

Use purchase orders, checks drawn on U.S. banks, cashier's checks, or international money orders.

Make payable to ERS-NASS.

Credit Card Orders:

☐ MasterCard ☐ VISA Total charges \$ _____

Credit card number:

[illegible]

Expiration date:

MonthYear

Name _____

Address _____

City, State, Zip _____

Daytime phone () _____

Mail to:

ERS-NASS
P.O. Box 1608
Rockville, MD

20849-1608

United States
Department of Agriculture
Washington, DC 20250

OFFICIAL BUSINESS
Penalty for Private Use, \$300

FIRST-CLASS MAIL
POSTAGE & FEES PAID
U.S. Dept. of Agriculture
Permit No. G-145

Moving? To change your address, send this sheet with label intact, showing new address, to EMS Information, Rm. 228, 1301 New York Ave., N.W., Washington, D.C. 20005-4788

What's Your Subscription Situation?

Your subscription to *Agricultural Outlook* expires in the month and year shown on the top line of your mailing label. The expiration date will appear in one of two formats: FEB89 (for February 1989) or 890430 (for April 30, 1989). Disregard this notice if no renewal date appears. Renew today by calling, toll free, 1-800-999-6779, or return this form with your mailing label attached.

Agricultural Outlook

Renewal

| | | | |
|---|----------|-------------------------|--------------------------|
| <input type="checkbox"/> Bill me. | | | |
| <input type="checkbox"/> Enclosed is \$_____. | Domestic | 1 Year _____ \$22.00 | 2 Years _____ \$43.00 |
| | Foreign | _____ \$27.50 | 3 Years _____ \$63.00 |
| | | _____ \$53.75 | _____ \$78.75 |

Mall to:
ERS-NASS
P.O. Box 1608
Rockville, MD 20849-1608

Use purchase orders, checks drawn on U.S. banks, cashier's checks, or international money orders.
Make payable to ERS-NASS.

ATTACH MAILING LABEL HERE

Credit Card Orders:

☐ MasterCard ☐ VISA Total charges \$_____.

Credit card number:

| | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

Expiration date:

| | |
|------------|--|
| | |
| Month/Year | |

For fastest service, call toll free, 1-800-999-6779 (8:30-5:00 ET)